

**PART 70 OPERATING PERMIT
ENHANCED NEW SOURCE REVIEW
OFFICE OF AIR MANAGEMENT**

**Sterling Casting Division
1000 West Wiley Street
Bluffton, Indiana 46714**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 and 326 IAC 2-1-3.2 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: T 179-6893-00005	
Issued by: Janet G. McCabe, Assistant Commissioner Office of Air Management	Issuance Date:

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Certification Form
Emergency/Deviation Occurrence Report
Quarterly Compliance Monitoring Form
Natural Gas Fired Boiler Certification
Quarterly Report Form

SECTION A

SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

The Permittee owns and operates a stationary grey iron foundry source.

Responsible Official:	Terry A. Eltzroth
Source Address:	1000 West Wiley Street, Bluffton, Indiana 46714
Mailing Address:	P.O. Box 396, Bluffton, Indiana 46714
SIC Code:	3321
County Location:	Wells
County Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Major Source, under PSD Rules; Major Source, Section 112 of the Clean Air Act

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source consists of the following emission units and pollution control devices:

- (a) One (1) cupola, identified as 110, constructed in 1976, with a maximum charge capacity of 9.0 tons of metal per hour, using a wet scrubber as control, and exhausting to stack SCR1.
- (b) One (1) inoculation process, identified as 150, constructed in 1976, inoculating a maximum of 9.0 tons of metal per hour.
- (c) Charge handling operations, identified as 120, constructed prior to 1976, with a maximum capacity of 9.0 tons of metal per hour.
- (d) Two (2) sand mullers, identified as 320, constructed in 1972, with a maximum capacity of 200 tons of sand per hour, but limited by the metal capacity to 44 tons of sand per hour, total, exhausting through a baghouse (BH-1).
- (e) One (1) north pouring and cooling deck, identified as 410/430, constructed in 1963, with a maximum capacity of 4.5 tons of metal and 22.0 tons of sand per hour.
- (f) One (1) south pouring and cooling deck, identified as 410/430, constructed in 1968, with a maximum capacity of 4.5 tons of metal and 22.0 tons of sand per hour.

- (g) Shakeout operations consisting of two (2) vibrating conveyors, not equipped with a control device, discharging to one (1) shakeout facility, identified as 450/460, constructed in 1964, with a maximum capacity of 9.0 tons of metal and 44.0 tons of sand per hour, exhausting through a baghouse (BH-1).
- (h) One (1) natural gas fired boiler, identified as 640, constructed in 1973, with a maximum capacity of 13.85 million British thermal units per hour, exhausting through stack SU-24.
- (i) Six (6) snag grinders, constructed in 1986, with a capacity of 9.0 tons of metal per hour, total, and exhausting to baghouse (BH-2).
- (j) One (1) whizz grinder, constructed in 1986, with a capacity of 2.0 tons of metal per hour and exhausting to baghouse (BH-3).
- (k) One (1) no. 2 wheelabrator spin blast, constructed in 1986, with a capacity of 3.0 tons of metal per hour, and exhausting to baghouse (BH-5).
- (l) One (1) no. 1 wheelabrator spin blast, constructed in 1986, with a capacity of 3.0 tons of metal per hour, exhausting to baghouses (BH-6 and BH-9).
- (m) One (1) tumble blast casting cleaner, constructed in 1986, with a capacity of 4.5 tons of metal per hour, exhausting to baghouses (BH-7 and BH-8).
- (n) One (1) table blast casting cleaner, constructed in 1986, with a capacity of 1.0 tons of metal per hour, exhausting to baghouse (BH-4).
- (o) Ten (10) isocure core machines, identified as 250, constructed in 1978, with a maximum capacity of 2.7 tons of sand per hour, exhausting through stacks SU11 through SU20.
- (p) One (1) core wash station, identified as 260, constructed in 1950, with a maximum wash solution unit of 30 inches wide, 42 inches long, and a liquid height of 16 inches.
- (q) One (1) pepset core machine, identified as 240, constructed in 1979, with a maximum capacity of 0.33 tons of sand per hour.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)]
[326 IAC 2-7-5(15)]

This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

- (a) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6.
- (b) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches soldering equipment, welding equipment.
- (c) Trimmers that do not produce fugitive emissions and that are equipped with a dust collection or trim material recovery device such as a bag filter or cyclone.

- (d) Grinding and machining operations controller with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per dry standard cubic feet per actual cubic feet per minute foot and a gas flow rate less than or equal to 4,000 actual cubic feet per minute feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and wood-working operations.
- (e) Other categories with emissions below insignificant thresholds:
 - (1) Twelve (12) shellcore machines equipped with two (2) shell core edge blow units

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

- (a) It is a major source, as defined in 326 IAC 2-7-1(22);
- (b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION B GENERAL CONDITIONS

B.1 Permit No Defense [326 IAC 2-1-10] [IC 13]

- (a) Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a Part 70 permit under 326 IAC 2-7.
- (b) This prohibition shall not apply to alleged violations of applicable requirements for which the Commissioner has granted a permit shield in accordance with 326 IAC 2-1-3.2 or 326 IAC 2-7-15, as set out in this permit in the Section B condition entitled "Permit Shield."

B.2 Definitions [326 IAC 2-7-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, any applicable definitions found in IC 13-11, 326 IAC 1-2 and 326 IAC 2-7 shall prevail.

B.3 Permit Term [326 IAC 2-7-5(2)]

This permit is issued for a fixed term of five (5) years from the effective date, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3.

B.4 Enforceability [326 IAC 2-7-7(a)]

- (a) All terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM.
- (b) Unless otherwise stated, terms and conditions of this permit, including any provisions to limit the source's potential to emit, are enforceable by the United States Environmental Protection Agency (U.S. EPA) and citizens under the Clean Air Act.

B.5 Termination of Right to Operate [326 IAC 2-7-10] [326 IAC 2-7-4(a)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-7-3 and 326 IAC 2-7-4(a).

B.6 Severability [326 IAC 2-7-5(5)]

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

B.7 Property Rights or Exclusive Privilege [326 IAC 2-7-5(6)(D)]

This permit does not convey any property rights of any sort, or any exclusive privilege.

B.8 Duty to Supplement and Provide Information [326 IAC 2-7-4(b)] [326 IAC 2-7-5(6)(E)]

- (a) The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

- (b) The Permittee shall furnish to IDEM, OAM, within a reasonable time, any information that IDEM, OAM, may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit.
- (c) Upon request, the Permittee shall also furnish to IDEM, OAM, copies of records required to be kept by this permit. If the Permittee wishes to assert a claim of confidentiality over any of the furnished records, the Permittee must furnish such records to IDEM, OAM, along with a claim of confidentiality under 326 IAC 17. If requested by IDEM, OAM, or the U.S. EPA, to furnish copies of requested records directly to U. S. EPA, and if the Permittee is making a claim of confidentiality regarding the furnished records, then the Permittee must furnish such confidential records directly to the U.S. EPA along with a claim of confidentiality under 40 CFR 2, Subpart B.

B.9 Compliance with Permit Conditions [326 IAC 2-7-5(6)(A)] [326 IAC 2-7-5(6)(B)]

- (a) The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit constitutes a violation of the Clean Air Act and is grounds for:
 - (1) Enforcement action;
 - (2) Permit termination, revocation and reissuance, or modification; or
 - (3) Denial of a permit renewal application.
- (b) It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

B.10 Certification [326 IAC 2-7-4(f)] [326 IAC 2-7-6(1)]

- (a) Any application form, report, or compliance certification submitted under this permit shall contain certification by a responsible official of truth, accuracy, and completeness. This certification, and any other certification required under this permit, shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, on the attached Certification Form, with each submittal.
- (c) A responsible official is defined at 326 IAC 2-7-1(34).

B.11 Annual Compliance Certification [326 IAC 2-7-6(5)]

- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. The certification shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in letter form no later than July 1 of each year to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

- (b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, on or before the date it is due.
- (c) The annual compliance certification report shall include the following:
- (1) The identification of each term or condition of this permit that is the basis of the certification;
 - (2) The compliance status;
 - (3) Whether compliance was based on continuous or intermittent data;
 - (4) The methods used for determining compliance of the source, currently and over the reporting period consistent with 326 IAC 2-7-5(3);
 - (5) Any insignificant activity that has been added without a permit revision; and
 - (6) Such other facts, as specified in Sections D of this permit, as IDEM, OAM, may require to determine the compliance status of the source.

The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

B.12 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)]
[326 IAC 1-6-3]

(a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMP) within ninety (90) after issuance of this permit, including the following information on each facility:

- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
- (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions;
- (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If due to circumstances beyond its control, the PMP cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

- (b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that lack of proper maintenance does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (c) PMP's shall be submitted to IDEM, OAM, upon request and shall be subject to review and approval by IDEM, OAM.

B.13 Emergency Provisions [326 IAC 2-7-16]

(a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation, except as provided in 326 IAC 2-7-16.

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

- (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
- (2) The permitted facility was at the time being properly operated;

- (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
- (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAM, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Management, Compliance Section), or
Telephone Number: 317-233-5674 (ask for Compliance Section)
Facsimile Number: 317-233-5967

- (5) For each emergency lasting one (1) hour or more, the Permittee submitted notice, either in writing or facsimile, of the emergency to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:

- (A) A description of the emergency;
- (B) Any steps taken to mitigate the emissions; and
- (C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
- (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions) for sources subject to this rule after the effective date of this rule. This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
- (e) IDEM, OAM, may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4-(c)(9) be revised in response to an emergency.

- (f) Failure to notify IDEM, OAM, by telephone or facsimile of an emergency lasting more than one (1) hour in compliance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.
- (g) Operations may continue during an emergency only if the following conditions are met:
 - (1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.
 - (2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:
 - (A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and
 - (B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value.

Any operation shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.

B.14 Permit Shield [326 IAC 2-7-15]

- (a) This condition provides a permit shield as addressed in 326 IAC 2-7-15.
- (b) This permit shall be used as the primary document for determining compliance with applicable requirements established by previously issued permits. Compliance with the conditions of this permit shall be deemed in compliance with any applicable requirements as of the date of permit issuance, provided that:
 - (1) The applicable requirements are included and specifically identified in this permit; or
 - (2) The permit contains an explicit determination or concise summary of a determination that other specifically identified requirements are not applicable.
- (c) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, including any term or condition from a previously issued construction or operation permit, IDEM, OAM, shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued. The permit shield shall continue in effect so long as the Permittee is in compliance with the compliance order.
- (d) No permit shield shall apply to any permit term or condition that is determined after issuance of this permit to have been based on erroneous information supplied in the permit application.

- (e) Nothing in 326 IAC 2-7-15 or in this permit shall alter or affect the following:
 - (1) The provisions of Section 303 of the Clean Air Act (emergency orders), including the authority of the U.S. EPA under Section 303 of the Clean Air Act;
 - (2) The liability of the Permittee for any violation of applicable requirements prior to or at the time of this permit's issuance;
 - (3) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; and
 - (4) The ability of U.S. EPA to obtain information from the Permittee under Section 114 of the Clean Air Act.
- (f) This permit shield is not applicable to any change made under 326 IAC 2-7-20(b)(2) (Sections 502(b)(10) of the Clean Air Act changes) and 326 IAC 2-7-20(c)(2) (trading based on State Implementation Plan (SIP) provisions).
- (g) This permit shield is not applicable to modifications eligible for group processing until after IDEM, OAM, has issued the modifications. [326 IAC 2-7-12(c)(7)]
- (h) This permit shield is not applicable to minor Part 70 permit modifications until after IDEM, OAM, has issued the modification. [326 IAC 2-7-12(b)(8)]

B.15 Multiple Exceedances [326 IAC 2-7-5(1)(E)]

Any exceedance of a permit limitation or condition contained in this permit, which occurs contemporaneously with an exceedance of an associated surrogate or operating parameter established to detect or assure compliance with that limit or condition, both arising out of the same act or occurrence, shall constitute a single potential violation of this permit.

B.16 Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]

- (a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provisions), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

within ten (10) calendar days from the date of the discovery of the deviation.

- (b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit or a rule. It does not include:
 - (1) An excursion from compliance monitoring parameters as identified in Section D of this permit unless tied to an applicable rule or limit; or

- (2) An emergency as defined in 326 IAC 2-7-1(12); or
- (3) Failure to implement elements of the Preventive Maintenance Plan unless lack of maintenance has caused or contributed to a deviation.
- (4) Failure to make or record information required by the compliance monitoring provisions of Section D unless such failure exceeds 5% of the required data in any calendar quarter.

A Permittee's failure to take the appropriate response step when an excursion of a compliance monitoring parameter has occurred is a deviation.

- (c) Written notification shall be submitted on the attached Emergency/Deviation Occurrence Reporting Form or its substantial equivalent. The notification does not need to be certified by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (d) Proper notice submittal under 326 IAC 2-7-16 satisfies the requirement of this subsection.

B.17 Permit Modification, Reopening, Revocation and Reissuance, or Termination
[326 IAC 2-7-5(6)(C)] [326 IAC 2-7-8(a)] [326 IAC 2-7-9]

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-7-5(6)(C)]
- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAM, determines any of the following:
 - (1) That this permit contains a material mistake.
 - (2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.
 - (3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-7-9(a)(3)]
- (c) Proceedings by IDEM, OAM, to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-7-9(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-7-9(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAM, at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAM, may provide a shorter time period in the case of an emergency. [326 IAC 2-7-9(c)]

B.18 Permit Renewal [326 IAC 2-7-4]

- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAM, and shall include the information specified in 326 IAC 2-7-4. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

- (b) Timely Submittal of Permit Renewal [326 IAC 2-7-4(a)(1)(D)]

- (1) A timely renewal application is one that is:

- (A) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
- (B) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, on or before the date it is due. [326 IAC 2-5-3]

- (2) If IDEM, OAM, upon receiving a timely and complete permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.

- (c) Right to Operate After Application for Renewal [326 IAC 2-7-3]

If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAM,, takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAM, any additional information identified as being needed to process the application.

- (d) United States Environmental Protection Agency Authority [326 IAC 2-7-8(e)]

If IDEM, OAM, fails to act in a timely way on a Part 70 permit renewal, the U.S. EPA may invoke its authority under Section 505(e) of the Clean Air Act to terminate or revoke and reissue a Part 70 permit.

B.19 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

- (a) The Permittee must comply with the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Any such application should be certified by the "responsible official" as defined by 326 IAC 2-7-1(34) only if a certification is required by the terms of the applicable rule
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.20 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)] [326 IAC 2-7-12 (b)(2)]

- (a) No Part 70 permit revision shall be required under any approved economic incentives, marketable Part 70 permits, emissions trading, and other similar programs or processes for changes that are provided for in a Part 70 permit.
- (b) Notwithstanding 326 IAC 2-7-12(b)(1)(D)(i) and 326 IAC 2-7-12(c)(1), minor Part 70 permit modification procedures may be used for Part 70 modifications involving the use of economic incentives, marketable Part 70 permits, emissions trading, and other similar approaches to the extent that such minor Part 70 permit modification procedures are explicitly provided for in the applicable State Implementation Plan (SIP) or in applicable requirements promulgated or approved by the U.S. EPA.

B.21 Changes Under Section 502(b)(10) of the Clean Air Act [326 IAC 2-7-20(b)]

The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a) and the following additional conditions:

- (a) For each such change, the required written notification shall include a brief description of the change within the source, the date on which the change will occur, any change in emissions, and any permit term or condition that is no longer applicable as a result of the change.
- (b) The permit shield, described in 326 IAC 2-7-15, shall not apply to any change made under 326 IAC 2-7-20(b).

B.22 Operational Flexibility [326 IAC 2-7-20]

- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b), (c), or (e), without a prior permit revision, if each of the following conditions is met:
 - (1) The changes are not modifications under any provision of Title I of the Clean Air Act;

- (2) Any approval required by 326 IAC 2-1 has been obtained;
- (3) The changes do not result in emissions which exceed the emissions allowable under this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
- (4) The Permittee notifies the:

Indiana Department of Environmental Management
Permits Branch, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

- (5) The Permittee maintains records on-site which document, on a rolling five (5) year basis, all such changes and emissions trading that are subject to 326 IAC 2-7-20(b), (c), or (e) and makes such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAM, in the notices specified in 326 IAC 2-7-20(b), (c)(1), and (e)(2).

- (b) For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:

- (1) A brief description of the change within the source;
- (2) The date on which the change will occur;
- (3) Any change in emissions; and
- (4) Any permit term or condition that is no longer applicable as a result of the change.

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (c) Emission Trades [326 IAC 2-7-20(c)]
The Permittee may trade increases and decreases in emissions in the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-7-20(c).
- (d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(9). No prior notification of IDEM, OAM, or U.S. EPA is required.
- (e) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

B.23 Construction Permit Requirement [326 IAC 2]

Except as allowed by Indiana P.L. 130-1996 Section 12, as amended by P.L. 244-1997, modification, construction, or reconstruction shall be approved as required by and in accordance with 326 IAC 2.

B.24 Inspection and Entry [326 IAC 2-7-6(2)]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, the Permittee shall allow IDEM, OAM, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a Part 70 source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
 - (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
 - (c) Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
 - (d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
 - (e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements. [326 IAC 2-7-6(6)]
- (1) The Permittee may assert a claim that, in the opinion of the Permittee, information removed or about to be removed from the source by IDEM, OAM, or an authorized representative, contains information that is confidential under IC 5-14-3-4(a). The claim shall be made in writing before or at the time the information is removed from the source. In the event that a claim of confidentiality is so asserted, neither IDEM, OAM, nor an authorized representative, may disclose the information unless and until IDEM, OAM, makes a determination under 326 IAC 17-1-7 through 326 IAC 17-1-9 that the information is not entitled to confidential treatment and that determination becomes final. [IC 5-14-3-4; IC 13-14-11-3; 326 IAC 17-1-7 through 326 IAC 17-1-9]

- (2) The Permittee, and IDEM, OAM, acknowledge that the federal law applies to claims of confidentiality made by the Permittee with regard to information removed or about to be removed from the source by U.S. EPA. [40 CFR Part 2, Subpart B]

B.25 Transfer of Ownership or Operation [326 IAC 2-1-6] [326 IAC 2-7-11]

Pursuant to 326 IAC 2-1-6 and 326 IAC 2-7-11:

- (a) In the event that ownership of this source is changed, the Permittee shall notify IDEM, OAM, Permits Branch, within thirty (30) days of the change. Notification shall include a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the Permittee and the new owner.
- (b) The written notification shall be sufficient to transfer the permit to the new owner by an administrative amendment pursuant to 326 IAC 2-7-11. The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) IDEM, OAM, shall reserve the right to issue a new permit.

B.26 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)]

- (a) The Permittee shall pay annual fees to IDEM, OAM, within thirty (30) calendar days of receipt of a billing. If the Permittee does not receive a bill from IDEM, OAM the applicable fee is due April 1 of each year.
- (b) Failure to pay may result in administrative enforcement action, or revocation of this permit.
- (c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-0425 (ask for OAM, Technical Support and Modeling Section), to determine the appropriate permit fee.

B.27 Enhanced New Source Review [326 IAC 2]

The requirements of the construction permit rules in 326 IAC 2 are satisfied by this permit for any previously unpermitted facilities and facilities to be constructed within eighteen (18) months after the date of issuance of this permit, as listed in Sections A.2 and A.3.

SECTION C

SOURCE OPERATION CONDITIONS

Entire Source

Emission Limitations and Standards [326 IAC 2-7-5(1)]

C.1 Particulate Matter Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) pounds per hour [326 IAC 6-3-2(c)]

Pursuant to 326 IAC 6-3-2(c), the allowable particulate matter emissions rate from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour.

C.2 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.3 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1. 326 IAC 4-1-3 (a)(2)(A) and (B) are not federally enforceable.

C.4 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 326 IAC 9-1-2.

C.5 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

C.6 Operation of Equipment [326 IAC 2-7-6(6)]

All air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission units vented to the control equipment are in operation.

C.7 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61.140]

- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.
- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
 - (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
 - (2) If there is a change in the following:
 - (A) Asbestos removal or demolition start date;
 - (B) Removal or demolition contractor; or
 - (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Asbestos Section, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

The notifications do not require a certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (e) Procedures for Asbestos Emission Control
The Permittee shall comply with the emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-4 emission control requirements are mandatory for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

- (f) Indiana Accredited Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement that the inspector be accredited is federally enforceable.

Testing Requirements [326 IAC 2-7-6(1)]

C.8 Performance Testing [326 IAC 3-6]

- (a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing methods approved by IDEM, OAM.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The Permittee shall submit a notice of the actual test date to the above address so that it is received at least two weeks prior to the test date.

- (b) All test reports must be received by IDEM, OAM within forty-five (45) days after the completion of the testing. An extension may be granted by the Commissioner, if the source submits to IDEM, OAM, a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

The documentation submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]

C.9 Compliance Schedule [326 IAC 2-7-6(3)]

The Permittee:

- (a) Has certified that all facilities at this source are in compliance with all applicable requirements; and
- (b) Has submitted a statement that the Permittee will continue to comply with such requirements; and
- (c) Will comply with such applicable requirements that become effective during the term of this permit.

C.10 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment, no more than ninety (90) after receipt of this permit. If due to circumstances beyond its control, this schedule cannot be met, the Permittee may extend compliance schedule an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

C.11 Monitoring Methods [326 IAC 3]

Any monitoring or testing performed to meet the applicable requirements of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, or other approved methods as specified in this permit.

C.12 Pressure Gauge and Amperage Specifications

Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device or the amperage at any part of the unit or its control device, the gauge employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent ($\pm 2\%$) of full scale reading.

Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

C.13 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

- (a) The Permittee shall prepare written emergency reduction plans (ERPs) consistent with safe operating procedures.
- (b) These ERPs shall be submitted for approval to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

within ninety (90) days after the date of issuance of this permit.

The ERP does not require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

- (c) If the ERP is disapproved by IDEM, OAM, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP.
- (d) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.
- (e) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.
- (f) Upon direct notification by IDEM, OAM, that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

C.14 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68.215]

If a regulated substance, subject to 40 CFR 68, is present in a process in more than the threshold quantity, 40 CFR 68 is an applicable requirement and the Permittee shall:

- (a) Submit:
 - (1) A compliance schedule for meeting the requirements of 40 CFR 68 by the date provided in 40 CFR 68.10(a); or
 - (2) As a part of the compliance certification submitted under 326 IAC 2-7-6(5), a certification statement that the source is in compliance with all the requirements of 40 CFR 68, including the registration and submission of a Risk Management Plan (RMP); and
 - (3) A verification to IDEM, OAM, that a RMP or a revised plan was prepared and submitted as required by 40 CFR 68.
- (b) Provide annual certification to IDEM, OAM, that the Risk Management Plan is being properly implemented.

All documents submitted pursuant to this condition shall include the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

C.15 Compliance Monitoring Plan - Failure to Take Response Steps [326 IAC 2-7-5][326 IAC 2-7-6]
[326 IAC 1-6]

- (a) The Permittee is required to implement a compliance monitoring plan to ensure that reasonable information is available to evaluate its continuous compliance with applicable requirements. This compliance monitoring plan is comprised of:
 - (1) This condition;
 - (2) The Compliance Determination Requirements in Section D of this permit;

- (3) The Compliance Monitoring Requirements in Section D of this permit;
- (4) The Record Keeping and Reporting Requirements in Section C (Monitoring Data Availability, General Record Keeping Requirements, and General Reporting Requirements) and in Section D of this permit; and
- (5) A Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. CRP's shall be submitted to IDEM, OAM upon request and shall be subject to review and approval by IDEM, OAM. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee and maintained on site, and is comprised of:
 - (A) Response steps that will be implemented in the event that compliance related information indicates that a response step is needed pursuant to the requirements of Section D of this permit; and
 - (B) A time schedule for taking such response steps including a schedule for devising additional response steps for situations that may not have been predicted.
- (b) For each compliance monitoring condition of this permit, appropriate response steps shall be taken when indicated by the provisions of that compliance monitoring condition. Failure to perform the actions detailed in the compliance monitoring conditions or failure to take the response steps within the time prescribed in the Compliance Response Plan, shall constitute a violation of the permit unless taking the response steps set forth in the Compliance Response Plan would be unreasonable.
- (c) After investigating the reason for the excursion, the Permittee is excused from taking further response steps for any of the following reasons:
 - (1) The monitoring equipment malfunctioned, giving a false reading. This shall be an excuse from taking further response steps providing that prompt action was taken to correct the monitoring equipment.
 - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the permit, and such request has not been denied; or
 - (3) An automatic measurement was taken when the process was not operating; or
 - (4) The process has already returned to operating within "normal" parameters and no response steps are required.
- (d) Records shall be kept of all instances in which the compliance related information was not met and of all response steps taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.

C.16 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate corrective actions. The Permittee shall submit a description of these corrective actions to IDEM, OAM, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize emissions from the affected facility while the corrective actions are being implemented. IDEM, OAM shall notify the Permittee within thirty (30) days, if the corrective actions taken are deficient. The Permittee shall submit a description of additional corrective actions taken to IDEM, OAM within thirty (30) days of receipt of the notice of deficiency. IDEM, OAM reserves the authority to use enforcement activities to resolve noncompliant stack tests.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAM that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAM may extend the retesting deadline. Failure of the second test to demonstrate compliance with the appropriate permit conditions may be grounds for immediate revocation of the permit to operate the affected facility.

The documents submitted pursuant to this condition do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

C.17 Emission Statement [326 IAC 2-7-5(3)(C)(iii)][326 IAC 2-7-5(7)][326 IAC 2-7-19(c)][326 IAC 2-6]

- (a) The Permittee shall submit an annual emission statement certified pursuant to the requirements of 326 IAC 2-6, that must be received by July 1 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The annual emission statement shall meet the following requirements:
- (1) Indicate actual emissions of criteria pollutants from the source, in compliance with 326 IAC 2-6 (Emission Reporting);
 - (2) Indicate actual emissions of other regulated pollutants from the source, for purposes of Part 70 fee assessment.
- (b) The annual emission statement covers the twelve (12) consecutive month time period starting January 1 and ending December 31. The annual emission statement must be submitted to:
- Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015
- (c) The annual emission statement required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, on or before the date it is due.

C.18 Monitoring Data Availability [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)]

- (a) With the exception of performance tests conducted in accordance with Section C- Performance Testing, all observations, sampling, maintenance procedures, and record keeping, required as a condition of this permit shall be performed at all times the equipment is operating at normal representative conditions.
- (b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this permit is not operating, the Permittee shall either record the fact that the equipment is shut down or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this permit.
- (c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.
- (d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.
- (e) At its discretion, IDEM may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time in any quarter.
- (f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason for failure to perform the requirements stated in (a) above.

C.19 General Record Keeping Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-6]

- (a) Records of all required monitoring data and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years and available upon the request of an IDEM, OAM, representative. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a written request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Records of required monitoring information shall include, where applicable:
 - (1) The date, place, and time of sampling or measurements;
 - (2) The dates analyses were performed;
 - (3) The company or entity performing the analyses;
 - (4) The analytic techniques or methods used;
 - (5) The results of such analyses; and
 - (6) The operating conditions existing at the time of sampling or measurement.

- (c) Support information shall include, where applicable:
 - (1) Copies of all reports required by this permit;
 - (2) All original strip chart recordings for continuous monitoring instrumentation;
 - (3) All calibration and maintenance records;
 - (4) Records of preventive maintenance shall be sufficient to demonstrate that improper maintenance did not cause or contribute to a violation of any limitation on emissions or potential to emit. To be relied upon subsequent to any such violation, these records may include, but are not limited to: work orders, parts inventories, and operator's standard operating procedures. Records of response steps taken shall indicate whether the response steps were performed in accordance with the Compliance Response Plan required by Section C - Compliance Monitoring Plan - Failure to take Response Steps, of this permit, and whether a deviation from a permit condition was reported. All records shall briefly describe what maintenance and response steps were taken and indicate who performed the tasks.
- (d) All record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.20 General Reporting Requirements [326 IAC 2-7-5(3)(C)]

- (a) To affirm that the source has met all the compliance monitoring requirements stated in this permit the source shall submit a Quarterly Compliance Monitoring Report. Any deviation from the requirements and the date(s) of each deviation must be reported.
- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015
- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, on or before the date it is due.
- (d) Unless otherwise specified in this permit, any quarterly report shall be submitted within thirty (30) days of the end of the reporting period.
- (e) All instances of deviations as described in Section B- Deviations from Permit Requirements Conditions must be clearly identified in such reports.

- (f) Any corrective actions or response steps taken as a result of each deviation must be clearly identified in such reports.
- (g) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period.

The documents submitted pursuant to this condition do not require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

Stratospheric Ozone Protection

C.21 Compliance with 40 CFR 82 and 326 IAC 22-1

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with the standards for recycling and emissions reduction:

- (a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.
- (b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- (c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

- (a) One (1) cupola, identified as 110, constructed in 1976, with a maximum charge capacity of 9.0 tons of metal per hour, using a wet scrubber as control, and exhausting to stack SCR1.
- (b) One (1) inoculation process, identified as 150, constructed in 1976, inoculating a maximum of 9.0 tons of metal per hour.
- (c) Charge handling operations, identified as 120, constructed prior to 1976, with a maximum capacity of 9.0 tons of metal per hour.

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 Particulate Matter (PM) [326 IAC 6-3-2(c)]

Pursuant to 326 IAC 6-3-2(c) (Process Operations) the Permittee shall comply with the following:

- (a) The particulate matter (PM) emissions from the charge handling operations shall not exceed 17.9 pounds per hour when operating at a process weight rate of 9.0 tons per hour.
- (b) The particulate matter (PM) emissions from the cupola shall not exceed 17.9 pounds per hour when operating at a process weight rate of 9.0 tons per hour.
- (c) The particulate matter (PM) emissions from the inoculation process shall not exceed 17.9 pounds per hour when operating at a process weight rate of 9.0 tons per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour.

D.1.2 Carbon Monoxide (CO) Emission Limits [326 IAC 9-1]

Any change or modification that increases the process weight rate of the cupola to 10 tons per hour or more, including all charge ingredients, will cause the cupola to be subject to the requirements of 326 IAC 9-1, Carbon Monoxide Emission Limits.

D.1.3 Sulfur Dioxide (SO₂) Emission Limitations [326 IAC 7-1.1-2]

Pursuant to 326 IAC 7-1.1-2 (SO₂ Emissions Limitations) the SO₂ emissions from the cupola shall not exceed six (6.0) pounds per million British thermal units.

D.1.4 Volatile Organic Compounds (VOC) [326 IAC 8-6-1]

Any change or modification to these facilities which may increase potential emissions from the total of the one (1) cupola, one (1) inoculation process, charge handling operations, ten (10) isocure core machines and one (1) pepset core machine to 100 tons per year or more of VOC shall cause the facilities to be subject to 326 IAC 8-6-1 and shall require prior IDEM, OAM, approval.

D.1.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the cupola and inoculation facilities and any control devices.

Compliance Determination Requirements

D.1.6 Testing Requirements [326 IAC 2-7-6(1),(6)]

During the period between 30 and 36 months after issuance of this permit, the Permittee shall perform PM testing on the cupola scrubber to demonstrate compliance with Condition D.1.1 utilizing a method applicable to this facility. This test shall be repeated at least once every two and a half (2.5) years from the date of this valid compliance demonstration. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.

D.1.7 Sulfur Dioxide Emissions and Sulfur Content [326 IAC 2-7-5(3)(A)] [326 IAC 2-7-6]

Pursuant to 326 IAC 7-2, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed six (6.0) pounds per million British thermal units. Compliance shall be determined utilizing one of the following options:

- (a) Providing vendor analysis of coke delivered, if accompanied by a certification from the fuel supplier, as described under 40 CFR 60.48c(f)(3). The certification shall include:
 - (1) The name of the coke supplier; and
 - (2) The location of the coke when the sample was collected for analysis to determine the properties of the coke, specifically including whether the coke was sampled as delivered to the affected facility or whether the coke was collected from coke in storage at a coke preparation plant, at a coke supplier's facility, or at another location. The certification shall include the name of the coke plant, coke storage facility, or another location (where the sample was collected); and
 - (3) The results of the analysis of the coke from which the shipment came (or of the shipment itself) including the sulfur content, moisture content, ash content, and heat content; and
 - (4) The methods used to determine the properties of the coke; or
- (b) Sampling and analyzing the coke by using one of the following procedures:
 - (1) Minimum Coke Sampling Requirements and Analysis Methods:

- (A) The coke sample acquisition point shall be at a location where representative samples of the total coke flow to be combusted by the facility or facilities may be obtained. A single as-bunkered or as-burned sampling station may be used to represent the coke to be combusted by multiple facilities using the same stockpile feed system;
 - (B) Coke shall be sampled at least one (1) time per day;
 - (C) Minimum sample size shall be five hundred (500) grams;
 - (D) Samples shall be composited and analyzed at the end of each calendar quarter;
 - (E) Preparation of the coke sample, heat content analysis, and sulfur content analysis shall be determined pursuant to 326 IAC 3-7-2(c), (d), (e); or
- (2) Sample and analyze the coke pursuant to 326 IAC 3-7-3; or
- (c) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the cupola, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6, which is conducted with such frequency as to generate the amount of information required by (a) or (b) above. [326 IAC 7-2-1(b)]

A determination of noncompliance pursuant to any of the methods specified in (a), (b), or (c) above shall not be refuted by evidence of compliance pursuant to the other method.

D.1.8 Particulate Matter (PM)

The scrubber for PM control shall be in operation at all times when the cupola is in operation.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.1.9 Visible Emissions Notations

-
- (a) Daily visible emission notations of the cupola stack and inoculation emissions shall be performed during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
 - (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
 - (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
 - (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

D.1.10 Scrubber Inspections

An inspection shall be performed each calendar quarter of the scrubber controlling the cupola when venting to the atmosphere. A scrubber inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting indoors. Defective scrubber part(s) shall be replaced. In the event that a scrubber's failure has been observed:

- (a) The affected unit will be shut down immediately until the failed unit has been replaced.
- (b) Based upon the findings of the inspection, any additional corrective actions will be devised within eight (8) hours of discovery and will include a timetable for completion.

D.1.11 Failure Detection

In the event that a scrubber failure has been observed:

Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

D.1.12 Parametric Monitoring

The Permittee shall record the main scrubber blower drive motor amperage and water pressure of the scrubber used in conjunction with the cupola at least once per day when the cupola is in operation when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the main scrubber blower drive motor amperage shall be maintained at no less than 200 amps and the circulation water system line pressure shall be maintained above 15.0 pounds per square inch or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

The instruments used for determining the pressure and amperage shall comply with Section C - Pressure Gauge and Amperage Specifications, of this permit, shall be subject to approval by IDEM, OAM, and shall be calibrated at least once every six (6) months.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.13 Record Keeping Requirements

- (a) To document compliance with Condition D.1.1 and D.1.9, the Permittee shall maintain records of daily visible emission notations of the cupola stack and inoculation emissions.
- (b) To document compliance with Condition D.1.1 and D.1.10, the Permittee shall maintain the records of the results of the inspections required under Condition D.1.10 and the dates the vents are redirected.
- (c) To document compliance with Condition D.1.12, the Permittee shall maintain the following:

- (1) Daily records of the following operational parameters during normal operation when venting to the atmosphere:
 - (A) Water pressure; and
 - (B) Main scrubber blower drive motor amperage.
 - (2) Documentation of all response steps implemented, per event.
 - (3) Operation and preventive maintenance logs, including work purchases orders, shall be maintained.
 - (4) Quality Assurance/Quality Control (QA/QC) procedures.
 - (5) Operator standard operating procedures (SOP).
 - (6) Manufacturer's specifications or its equivalent.
 - (7) Equipment "troubleshooting" contingency plan.
 - (8) Documentation of the dates vents are redirected.
- (d) To document compliance with Condition D.1.3 and D.1.7, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the SO₂ emission limits established in D.1.3.
- (1) Calendar dates covered in the compliance determination period; and
 - (2) Actual coke usage since last compliance determination period; and
 - (3) Sulfur content, heat content, and ash content; and
 - (4) Sulfur dioxide emission rates; and
 - (5) Vendor analysis of coke and coke supplier certification, if the vendor analysis is used to determine compliance.
- (e) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.2

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

- (d) Two (2) sand mullers, identified as 320, constructed in 1972, with a maximum capacity of 200 tons of sand per hour, but limited by the metal capacity to 44 tons of sand per hour, total, exhausting through a baghouse (BH-1).
- (e) One (1) north pouring and cooling deck, identified as 410/430, constructed in 1963, with a maximum capacity of 4.5 tons of metal and 22.0 tons of sand per hour.
- (f) One (1) south pouring and cooling deck, identified as 410/430, constructed in 1968, with a maximum capacity of 4.5 tons of metal and 22.0 tons of sand per hour.
- (g) Shakeout operations consisting of two (2) vibrating conveyors, not equipped with a control device, discharging to one (1) shakeout facility, identified as 450/460, constructed in 1964, with a maximum capacity of 9.0 tons of metal and 44.0 tons of sand per hour, exhausting through a baghouse (BH-1).

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.2.1 Particulate Matter (PM) [326 IAC 6-3-2(c)]

- (a) Pursuant to 326 IAC 6-3-2(c) (Process Operations), the allowable PM emission rate from the shakeout operations shall not exceed 45.1 pounds per hour when operating at a process weight rate of 53.0 tons per hour (44.0 tons of sand and 9.0 tons of metal) and the allowable PM emission rate from each of the two (2) sand mullers shall not exceed 32.5 pounds per hour when operating at a process weight rate of 22.0 tons of sand per hour, each.
- (b) Pursuant to 326 IAC 6-3-2(c) (Process Operations), the allowable PM emission rate from the one (1) north pouring/cooling deck and one (1) south pouring/cooling deck shall each not exceed 36.8 pounds per hour, each, when operating at a process weight rate of 26.5 tons per hour (22.0 tons of sand and 4.5 tons of metal), each.

The pounds per hour limitations were calculated with the following equations:

Interpolation and extrapolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour, and
P = process weight rate in tons per hour.

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40$$

where E = rate of emission in pounds per hour, and
P = process weight rate in tons per hour.

D.2.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and their control device.

Compliance Determination Requirements

D.2.3 Testing Requirements [326 IAC 2-7-6(1),(6)]

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the PM limit specified in Condition D.2.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

D.2.4 Particulate Matter (PM)

The baghouse (BH-1) for PM control shall be in operation at all times when the shakeout operations or two (2) sand mullers are in operation.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.2.5 Visible Emissions Notations

- (a) Daily visible emission notations of the baghouse (BH-1) stack exhaust and the pouring/cooling emissions shall be performed during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

D.2.6 Parametric Monitoring

The Permittee shall record the total static pressure drop across the baghouse (BH-1), used in conjunction with the shakeout operations and two (2) sand mullers, at least once per day when the processes are in operation when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 2.0 and 10.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAM, and shall be calibrated at least once every six (6) months.

D.2.7 Baghouse Inspections

An inspection shall be performed each calendar quarter of all bags controlling the shakeout operations and two (2) sand mullers when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting indoors. All defective bags shall be replaced.

D.2.8 Broken Bag or Failed Bag Detection

In the event that bag failure has been observed:

- (a) The affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
- (b) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.2.9 Record Keeping Requirements

- (a) To document compliance with Condition D.2.1 and D.2.5, the Permittee shall maintain records of daily visible emission notations of the baghouse (BH-1) stack exhaust and the pouring/cooling emissions.
- (b) To document compliance with Condition D.2.6, the Permittee shall maintain the following:
 - (1) Daily records of the following operational parameters during normal operation when venting to the atmosphere:

Inlet and outlet differential static pressure.
 - (2) Documentation of all response steps implemented, per event.
 - (3) Operation and preventive maintenance logs, including work purchases orders, shall be maintained.
 - (4) Quality Assurance/Quality Control (QA/QC) procedures.

- (5) Operator standard operating procedures (SOP).
 - (6) Manufacturer's specifications or its equivalent.
 - (7) Equipment "troubleshooting" contingency plan.
 - (8) Documentation of the dates vents are redirected.
- (c) To document compliance with Condition D.2.1 and D.2.7, the Permittee shall maintain records of the results of the inspections required under Condition D.2.7 and the dates the vents are redirected.
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.3 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

- (h) One (1) natural gas fired boiler, identified as 640, constructed in 1973, with a maximum capacity of 13.85 million British thermal units per hour, exhausting through stack SU-24.

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.3.1 Particulate Emission Limitations for Sources of Indirect Heating (PM) [326 IAC 6-2-3]

Pursuant to 326 IAC 6-2-3(e), the PM emissions from the boiler shall in no case exceed 0.6 pound per million British thermal units. This limitation is based upon the following equation and the maximum allowable being 0.6 pound per million British thermal units pursuant to 326 IAC 6-2-3(e):

$$Pt = (C \times a \times h) / (76.5 \times Q^{0.75} \times N^{0.25})$$

where:

Pt = Pounds of particulate matter emitted per million British thermal units (lb/MMBtu) heat input

Q = Total source maximum operating capacity rating in million British thermal units per hour (MMBtu/hr) heat input.

C = Maximum ground level concentration with respect to distance from the point source at the "critical" wind speed for level terrain. This shall equal 50 micrograms per cubic feet per minute meter for a period not to exceed a sixty (60) minute time period.

N = Number of stacks in fuel burning operation.

a = Plume rise factor which is used to make allowance for less than theoretical plume rise. The value 0.67 shall be used for Q less than or equal to 1,000 million British thermal units per hour heat input.

h = Stack height in feet. If a number of stacks of different heights exist, the average stack height will be computed using a weighted average of stack heights.

Compliance Determination Requirements

D.3.2 Testing Requirements [326 IAC 2-7-6(1),(6)]

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the PM limit specified in Condition D.3.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.3.3 Reporting Requirements (Natural Gas Certification)

The Permittee shall certify within thirty (30) days after the end of the quarter being reported, using the Natural Gas Fired Boiler Certification located at the end of this permit, or its equivalent, which fuels were fired in the boilers during the report period and the dates of use.

SECTION D.4

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

- (i) Six (6) snag grinders, constructed in 1986, with a capacity of 9.0 tons of metal per hour, total, and exhausting to baghouse (BH-2).
- (j) One (1) whizz grinder, constructed in 1986, with a capacity of 2.0 tons of metal per hour and exhausting to baghouse (BH-3).
- (k) One (1) no. 2 wheelabrator spin blast, constructed in 1986, with a capacity of 3.0 tons of metal per hour, and exhausting to baghouse (BH-5).
- (l) One (1) no. 1 wheelabrator spin blast, constructed in 1986, with a capacity of 3.0 tons of metal per hour, exhausting to baghouses (BH-6 and BH-9).
- (m) One (1) tumble blast casting cleaner, constructed in 1986, with a capacity of 4.5 tons of metal per hour, exhausting to baghouses (BH-7 and BH-8).
- (n) One (1) table blast casting cleaner, constructed in 1986, with a capacity of 1.0 tons of metal per hour, exhausting to baghouse (BH-4).

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.4.1 Particulate Matter (PM) [326 IAC 6-3-2(c)]

(a) Pursuant to 326 IAC 6-3-2(c) (Process Operations):

- (1) The allowable particulate matter (PM) emissions from the total of the six (6) snag grinders exhausting to baghouse BH-2 shall not exceed 17.9 pounds per hour when operating at a process weight rate of 9.0 tons per hour;
- (2) The particulate matter (PM) emissions from the one (1) whizz grinder exhausting to baghouse BH-3 shall not exceed 6.52 pounds per hour when operating at a process weight rate of 2.0 tons per hour;
- (3) The particulate matter (PM) emissions from the one (1) table blast casting cleaner exhausting to baghouse BH-4 shall not exceed 4.10 pounds per hour when operating at a process weight rate of 1.0 ton per hour;
- (4) The particulate matter (PM) emissions from the one (1) no. 1 wheelabrator spin blast and one (1) no. 2 wheelabrator spin blast exhausting to baghouses BH-6 and 9, and BH-5, respectively, shall not exceed 8.56 pounds per hour when operating at a process weight rate of 3.0 tons per hour; and
- (5) The particulate matter (PM) emissions from the one (1) tumble blast casting cleaner exhausting to baghouses BH-7 and 8 shall not exceed 11.2 pounds per hour when operating at a process weight rate of 4.5 tons per hour.

The pounds per hour limitations were calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour.}$$

- (b) The PM emissions shall not exceed 4.8 pounds per hour and PM₁₀ emissions shall not exceed 2.5 pounds per hour. This condition and Condition D.4.4, along with the compliance monitoring requirements, and record keeping and reporting requirements limit the potential to emit PM and PM₁₀, including fugitive emissions, to less than 25 tons per year and 15 tons per year, respectively, and the requirements of 326 IAC 2-2, Prevention of Significant Deterioration, are not applicable.

D.4.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and their control devices.

Compliance Determination Requirements

D.4.3 Testing Requirements [326 IAC 2-7-6(1),(6)]

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the PM limits specified in Condition D.4.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

D.4.4 Particulate Matter (PM)

The baghouses (BH-2, BH-3, BH-4, BH-5, BH-6, BH-7, BH-8 and BH-9) for PM control shall be in operation at all times when the one (1) whizz grinder, six (6) snag grinders, one (1) no. 1 wheelabrator spin blast, one (1) no. 2 wheelabrator spin blast, one (1) tumble blast casting cleaner, and one (1) table blast casting cleaner are in operation.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.4.5 Visible Emissions Notations

- (a) Daily visible emission notations of the baghouses (BH-2, BH-3, BH-4, BH-5, BH-6, BH-7, BH-8 and BH-9) stacks exhaust shall be performed during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

D.4.6 Parametric Monitoring

The Permittee shall record the total static pressure drop across the baghouses (BH-2, BH-3, BH-4, BH-5, BH-6, BH-7, BH-8 and BH-9) used in conjunction with the one (1) whizz grinder, six (6) snag grinders, one (1) no. 1 wheelaborator spin blast, one (1) no. 2 wheelaborator spin blast, one (1) tumble blast casting cleaner, and one (1) table blast casting cleaner at least once per day when the facilities are in operation when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across each baghouse shall be maintained within the range of 2.0 and 10.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Amperage Specifications, of this permit, shall be subject to approval by IDEM, OAM, and shall be calibrated at least once every six (6) months.

D.4.7 Baghouse Inspections

An inspection shall be performed each calendar quarter of all bags controlling the one (1) whizz grinder, six (6) snag grinders, one (1) no. 1 wheelaborator spin blast, one (1) no. 2 wheelaborator spin blast, one (1) tumble blast casting cleaner, and one (1) table blast casting cleaner when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting indoors. All defective bags shall be replaced.

D.4.8 Broken Bag or Failed Bag Detection

In the event that bag failure has been observed:

- (a) The affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
- (b) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.4.9 Record Keeping Requirements

- (a) To document compliance with Condition D.4.1 and D.4.5, the Permittee shall maintain records of daily visible emission notations of the baghouses (BH-2, BH-3, BH-4, BH-5, BH-6, BH-7, BH-8 and BH-9) stacks exhaust.
- (b) To document compliance with Condition D.4.6, the Permittee shall maintain the following:
 - (1) Daily records of the following operational parameters during normal operation when venting to the atmosphere:

Inlet and outlet differential static pressure.
 - (2) Documentation of all response steps implemented, per event.
 - (3) Operation and preventive maintenance logs, including work purchases orders, shall be maintained.
 - (4) Quality Assurance/Quality Control (QA/QC) procedures.
 - (5) Operator standard operating procedures (SOP).
 - (6) Manufacturer's specifications or its equivalent.
 - (7) Equipment "troubleshooting" contingency plan.
 - (8) Documentation of the dates vents are redirected.
- (c) To document compliance with Condition D.4.1 and D.4.7, the Permittee shall maintain records of the results of the inspections required under Condition D.4.7 and the dates the vents are redirected.
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.5

FACILITY CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

- (o) Ten (10) isocure core machines, identified as 250, constructed in 1978, with a maximum capacity of 2.7 tons of sand per hour, exhausting through stacks SU11 through SU20.

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.5.1 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]

The input of resin and triethylamine to the ten (10) isocure core machines shall be limited such that the potential to emit VOC does not exceed 39 tons per twelve (12) consecutive month period. Therefore, the requirements of 326 IAC 2-2, Prevention of Significant Deterioration, are not applicable. The VOC emissions shall be computed as follows:

VOC emissions = triethylamine usage + (resin usage - (resin usage * % resin reacted))

The percent resin reacted shall be determined using "Form R: Reporting of Binder Chemicals Used in Foundries," by the American Foundrymen's Society, Inc. and the Casting Industry Suppliers Association or other methods acceptable to IDEM, OAM.

D.5.2 Particulate Matter (PM) [326 IAC 6-3-2(c)]

Pursuant to 326 IAC 6-3-2(c) (Process Operations), the allowable particulate matter (PM) emissions from the ten (10) isocure core machines shall not exceed 7.98 pounds per hour when operating at a process weight rate of 2.70 tons of sand per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate.}$$

D.5.3 Volatile Organic Compounds (VOC) [326 IAC 8-6-1]

Any change or modification to these facilities which may increase potential emissions from the total of the one (1) cupola, one (1) inoculation process, charge handling operations, ten (10) isocure core machines and one (1) pepset core machine to 100 tons per year or more of VOC shall cause the facilities to be subject to 326 IAC 8-6-1 and shall require prior IDEM, OAM, approval.

D.5.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and any control device.

Compliance Determination Requirements

D.5.5 Testing Requirements [326 IAC 2-7-6(1),(6)]

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the VOC and PM limits specified in Conditions D.5.1 and D.5.2 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

D.5.6 Volatile Organic Compounds (VOC) [326 IAC 2-2][40 CFR 52.21]

Compliance with D.5.1 shall be demonstrated at the end of each month based on the total resin and triethylamine gas usage for the most recent twelve (12) months and the Material Safety Data Sheet for each resin. The usage of triethylamine shall equal the triethylamine emissions. The VOC emissions resulting from the resin usage shall be calculated by subtracting the percent reacted from the VOC input to the ten (10) isocure core machines. Until such time that new emissions information is made available by U.S. EPA in its AP-42 document or other U.S. EPA- approved form, the percent reacted shall be calculated using the following reference: "Form R: Reporting of Binder Chemicals Used in Foundries," by the American Foundrymen's Society, Inc. and the Casting Industry Suppliers Association.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.5.7 Record Keeping Requirements

- (a) To document compliance with Condition D.5.1, the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC usage limits and the VOC emission limits established in Conditions D.5.1.
- (1) The amount and VOC content of each resin. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.
 - (2) The total VOC usage for each month; and
 - (3) The weight of VOCs emitted for each compliance period.
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.5.8 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.5.1 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

SECTION D.6

FACILITY CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

- (p) One (1) core wash station, identified as 260, constructed in 1950, with a maximum wash solution unit of 30 inches wide, 42 inches long, and a liquid height of 16 inches.

Compliance Determination Requirements

D.6.1 Testing Requirements [326 IAC 2-7-6(1),(6)]

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance with any regulations. If testing is required by IDEM, compliance shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

SECTION D.7

FACILITY CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

- (q) One (1) pepset core machine, identified as 240, constructed in 1979, with a maximum capacity of 0.33 tons of sand per hour.

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.7.1 Particulate Matter (PM) [326 IAC 6-3-2(c)]

Pursuant to 326 IAC 6-3-2(c) (Process Operations), the allowable particulate matter (PM) emissions from the one (1) pepset core machines shall not exceed 1.96 pounds per hour when operating at a process weight rate of 0.33 tons of sand per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate.}$$

D.7.2 Volatile Organic Compounds (VOC) [326 IAC 8-6-1]

Any change or modification to these facilities which may increase potential emissions from the total of the one (1) cupola, one (1) inoculation process, charge handling operations, ten (10) isocure core machines and one (1) pepset core machine to 100 tons per year or more of VOC shall cause the facilities to be subject to 326 IAC 8-6-1 and shall require prior IDEM, OAM, approval.

Compliance Determination Requirements

D.7.3 Testing Requirements [326 IAC 2-7-6(1),(6)]

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the PM limit specified in Condition D.6.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

SECTION D.8

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)] Insignificant Activities

- (a) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6.
- (b) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches soldering equipment, welding equipment.
- (c) Trimmers that do not produce fugitive emissions and that are equipped with a dust collection or trim material recovery device such as a bag filter or cyclone.
- (d) Grinding and machining operations controller with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per dry standard cubic feet per actual cubic feet per minute foot and a gas flow rate less than or equal to 4,000 actual cubic feet per minute feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations.
- (e) Other categories with emissions below insignificant thresholds:
 - (1) Twelve (12) shellcore machines equipped with two (2) shell core edge blow units

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.8.1 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), the owner or operator of the degreasing operations shall:

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;
- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements;
- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

D.8.2 Particulate Matter (PM) [326 IAC 6-3-2(c)]

Pursuant to 326 IAC 6-3 (Process Operations), the PM emission rate shall not exceed the allowable PM emission rate for manufacturing activities, trimming, grinding, finishing, and blasting operations, along with the twelve (12) shell core machines, all classified as insignificant activities. The allowable emission rate shall be based on the following equation:

Interpolation and extrapolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour.

Compliance Determination Requirements

D.8.3 Testing Requirements [326 IAC 2-7-6(1),(6)]

The Permittee is not required to test these facilities by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the PM limit specified in Condition D.8.2 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION**

**PART 70 OPERATING PERMIT
CERTIFICATION**

Source Name: Sterling Casting Division
Source Address: 1000 West Wiley Street, Bluffton, Indiana 46714
Mailing Address: P.O. Box 396, Bluffton, Indiana 46714
Part 70 Permit No.: T 179-6893-00005

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.

Please check what document is being certified:

- 9 Annual Compliance Certification Letter
- 9 Test Result (specify) _____
- 9 Report (specify) _____
- 9 Notification (specify) _____
- 9 Other (specify) _____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION
P.O. Box 6015
100 North Senate Avenue
Indianapolis, Indiana 46206-6015
Phone: 317-233-5674
Fax: 317-233-5967

PART 70 OPERATING PERMIT
EMERGENCY/DEVIATION OCCURRENCE REPORT

Source Name: Sterling Casting Division
Source Address: 1000 West Wiley Street, Bluffton, Indiana 46714
Mailing Address: P.O. Box 396, Bluffton, Indiana 46714
Part 70 Permit No.: T 179-6893-00005

This form consists of 2 pages

Page 1 of 2

Check either No. 1 or No.2

- 9** 1. This is an emergency as defined in 326 IAC 2-7-1(12)
- ☐ The Permittee must notify the Office of Air Management (OAM), within four **(4)** business hours (1-800-451-6027 or 317-233-5674, ask for Compliance Section); and
- ☐ The Permittee must submit notice in writing or by facsimile within two **(2)** days (Facsimile Number: 317-233-5967), and follow the other requirements of 326 IAC 2-7-16
- 9** 2. This is a deviation, reportable per 326 IAC 2-7-5(3)(c)
- ☐ The Permittee must submit notice in writing within ten **(10)** calendar days

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:

Control Equipment:

Permit Condition or Operation Limitation in Permit:

Description of the Emergency/Deviation:

Describe the cause of the Emergency/Deviation:

If any of the following are not applicable, mark N/A

Page 2 of 2

Date/Time Emergency/Deviation started:
Date/Time Emergency/Deviation was corrected:
Was the facility being properly operated at the time of the emergency/deviation? Y N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO ₂ , VOC, NO _x , CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency/deviation:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by: _____
Title / Position: _____
Date: _____
Phone: _____

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION**

**PART 70 OPERATING PERMIT
QUARTERLY COMPLIANCE MONITORING REPORT**

Source Name: Sterling Casting Division
Source Address: 1000 West Wiley Street, Bluffton, Indiana 46714
Mailing Address: P.O. Box 396, Bluffton, Indiana 46714
Part 70 Permit No.: T 179-6893-00005

Months: _____ to _____ Year: _____

This report is an affirmation that the source has met all the compliance monitoring requirements stated in this permit. This report shall be submitted quarterly. Any deviation from the compliance monitoring requirements and the date(s) of each deviation must be reported. Additional pages may be attached if necessary. This form can be supplemented by attaching the Emergency/Deviation Occurrence Report. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

9 NO DEVIATIONS OCCURRED THIS REPORTING PERIOD

9 THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD.

Compliance Monitoring Requirement (e.g. Permit Condition D.1.3)	Number of Deviations	Date of Each Deviation

Form Completed By: _____

Title/Position: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION**

**PART 70 OPERATING PERMIT
NATURAL GAS FIRED BOILER CERTIFICATION**

Source Name: Sterling Casting Division
Source Address: 1000 West Wiley Street, Bluffton, Indiana 46714
Mailing Address: P.O. Box 396, Bluffton, Indiana 46714
Part 70 Permit No.: T 179-6893-00005

**This certification shall be included when submitting monitoring, testing reports/results
or other documents as required by this permit.**

Report period

Beginning: _____

Ending: _____

Boiler Affected

Alternate Fuel

Days burning alternate fuel

From

To

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature: _____

Printed Name: _____

Title/Position: _____

Date: _____

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION**

Part 70 Quarterly Report

Source Name: Sterling Casting Division
Source Address: 1000 West Wiley Street, Bluffton, Indiana 46714
Mailing Address: P.O. Box 396, Bluffton, Indiana 46714
Part 70 Permit No.: T 179-6893-00005
Facility: Ten (10) isocure core machines
Parameter: VOC emissions
Limit: 39 tons per twelve (12) consecutive months

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.

Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

Indiana Department of Environmental Management Office of Air Management

Technical Support Document (TSD) for a Part 70 Operating Permit and Enhanced New Source Review (ENSR)

Source Background and Description

Source Name: Sterling Casting Division
Source Location: 1000 West Wiley Street, Bluffton, Indiana 46714
County: Wells
SIC Code: 3321
Operation Permit No.: T 179-6893-00005
Permit Reviewer: CarrieAnn Ortolani

The Office of Air Management (OAM) has reviewed a Part 70 permit application from Sterling Casting Division relating to the operation of a grey iron foundry.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

- (a) One (1) cupola, identified as 110, constructed in 1976, with a maximum capacity of 9.0 tons of metal per hour, using a wet scrubber as control, and exhausting to stack SCR1.
- (b) One (1) inoculation process, identified as 150, constructed in 1976, with a maximum capacity of 9.0 tons of metal per hour.
- (c) Charge handling operations, identified as 120, constructed prior to 1976, with a maximum capacity of 9.0 tons of metal per hour.
- (d) Two (2) sand mullers, identified as 320, constructed in 1972, with a maximum capacity of 200 tons of sand per hour, but limited by the metal capacity to 22 tons of sand per hour, each, exhausting through a baghouse (BH-1).
- (e) One (1) north pouring and cooling deck, identified as 410/430, constructed in 1963, with a maximum capacity of 4.5 tons of metal per hour.
- (f) One (1) south pouring and cooling deck, identified as 410/430, constructed in 1968, with a maximum capacity of 4.5 tons of metal per hour.
- (g) Shakeout operations consisting of two (2) vibrating conveyors discharging to one (1) shakeout facility, identified as 450/460, constructed in 1964, with a maximum capacity of 9.0 tons of metal and 44.0 tons of sand per hour, exhausting through a baghouse (BH-1).
- (h) One (1) natural gas fired boiler, identified as 640, constructed in 1973, with a maximum capacity of 13.85 million British thermal units per hour, exhausting through stack SU-24.

- (i) Five (5) snag grinders, constructed in 1986, with capacities of 9.0 tons of metal per hour, each, and exhausting to baghouse (BH-2).
- (j) Two (2) whizz grinders, constructed in 1986, with capacities of 9.0 tons of metal per hour, each, and exhausting to baghouse (BH-3).
- (k) One (1) no. 2 wheelabrator spin blast, constructed in 1986, with a capacity of 3.0 tons of metal per hour, and exhausting to baghouse (BH-5).
- (l) One (1) no. 1 wheelabrator spin blast, constructed in 1986, with a capacity of 3.0 tons of metal per hour, exhausting to baghouses (BH-6 and BH-9).
- (m) One (1) tumble blast casting cleaner, constructed in 1986, with a capacity of 4.5 tons of metal per hour, exhausting to baghouses (BH-7 and BH-8).
- (n) One (1) table blast casting cleaner, constructed in 1986, with a capacity of 1.0 tons of metal per hour, exhausting to baghouse (BH-4).

Unpermitted Emission Units and Pollution Control Equipment Requiring ENSR

The source also consists of the following unpermitted facilities/units:

- (o) Ten (10) isocure core machines, identified as 250, constructed in 1978, with a maximum capacity of 2.7 tons of sand per hour, exhausting through stacks SU11 through SU20.
- (p) One (1) core wash station, identified as 260, constructed in 1950, with a maximum capacity of 3.3 tons of sand per hour.
- (q) One (1) pepset core machine, identified as 240, constructed in 1979, with a maximum capacity of 0.33 tons of sand per hour.

New Emission Units and Pollution Control Equipment Requiring ENSR

There are no new facilities to be reviewed under the ENSR process.

Insignificant Activities

The source also consists of the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour.
- (b) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons.

- (c) A petroleum fuel, other than gasoline, dispensing facility, having a storage capacity of less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month.
- (d) Degreasing operations constructed after 1980 that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6.
- (e) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches soldering equipment, welding equipment.
- (f) Water based adhesives that are less than or equal to five percent (5%) by volume of VOCs excluding HAPs.
- (g) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.
- (h) Trimmers that do not produce fugitive emissions and that are equipped with a dust collection or trim material recovery device such as a bag filter or cyclone.
- (i) Paved and unpaved roads and parking lots with public access.
- (j) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per dry standard cubic feet per actual cubic feet per minute foot and a gas flow rate less than or equal to 4,000 actual cubic feet per minute feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and wood-working operations.
- (k) Mold release agents using low volatile products (vapor pressure less than or equal to 2 kiloPascals measured at 38EC).
- (l) Other categories with emissions below insignificant thresholds:
 - (1) Electric induction holding furnace;
 - (2) Twelve (12) shellcore machines equipped with two (2) shell core edge blow units;
 - (3) Sand conveyor; and
 - (4) Sand apron conveyor.

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following: list permits, registrations, modifications, exemptions, etc.

- (a) OP 90-06-89-0074, issued on January 21, 1987;

- (b) OP 90-06-89-0075, issued on January 21, 1987;
- (c) OP 90-06-89-0076, issued on January 21, 1987;
- (d) OP 90-06-89-0077, issued on January 21, 1987; and
- (e) OP 90-06-89-0078, issued on January 21, 1987.

All conditions from previous approvals were incorporated into this Part 70 permit except the following:

- (a) OP 90-06-89-0074, issued on January 21, 1987

Condition 4: That particulate matter emissions shall comply with 325 IAC 11-1 (copy enclosed).

Reason not incorporated: The cupola was constructed in 1976 which is after the latest applicability date of December 6, 1968 for 326 IAC 11-1. Particulate matter emissions from the cupola will be subject to 326 IAC 6-3 (Process operations).

- (b) OP 90-06-89-0078, issued on January 21, 1987

Condition 4: That sulfur dioxide emissions shall be limited to 6 pounds per million British thermal units of heat according to 325 IAC 7-1.

Reason not incorporated: The 13.85 million British thermal unit per hour boiler no longer burns # 2 fuel oil. Therefore, the sulfur dioxide limit is not necessary.

- (c) OP 90-06-89-0078, issued on January 21, 1987

Condition 5: The particulate matter emissions from the boiler shall be limited to 0.8 pounds per million British thermal units of heat input according to 325 IAC 6-2.1.

Reason not incorporated: The 13.85 million British thermal unit per hour boiler was constructed after June 8, 1972. Therefore, the PM emissions may in no case exceed 0.6 pound per million British thermal units pursuant to 326 IAC 6-2-3(e).

Note: The citation used on these existing conditions was 325 IAC, rather than 326 IAC, because they were specified prior to the re-codification of the air rules.

Enforcement Issue

- (a) IDEM is aware that equipment has been constructed and operated prior to receipt of the proper permit. The subject equipment is listed in this Technical Support Document under the condition entitled *Unpermitted Emission Units and Pollution Control Equipment Requiring ENSR*.
- (b) IDEM is reviewing this matter and will take appropriate action. This proposed permit is intended to satisfy the requirements of the construction permit rules.

Recommendation

The staff recommends to the Commissioner that the Part 70 permit be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An administratively complete Part 70 permit application for the purposes of this review was received on October 11, 1996. Additional information was received on January 9, March 16, April 1, April 14, May 15, August 19, and September 9, 1998.

A notice of completeness letter was mailed to the source on October 29, 1996.

Emission Calculations

See pages 1 through 10 of 10 of Appendix A of this document for detailed emissions calculations.

Potential Emissions

Pursuant to 326 IAC 1-2-55, Potential Emissions are defined as "emissions of any one (1) pollutant which would be emitted from a facility, if that facility were operated without the use of pollution control equipment unless such control equipment is necessary for the facility to produce its normal product or is integral to the normal operation of the facility."

Pollutant	Potential Emissions (tons/year)
PM	9,274
PM ₁₀	8,682
SO ₂	35.9
VOC	224
CO	5,721
NO _x	12.8

Note: For the purpose of determining Title V applicability for particulates, PM₁₀, not PM, is the regulated pollutant in consideration.

HAPs	Potential Emissions (tons/year)
Lead	greater than 10
Nickel	less than 10
Chromium	less than 10
Manganese	less than 10
Phenol	less than 10
Naphthalene	greater than 10
MDI	less than 10
Triethylamine	greater than 10
TOTAL	greater than 25

- (a) The potential emissions (as defined in 326 IAC 1-2-55) of PM₁₀, VOC, and CO are equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.
- (b) The potential emissions (as defined in 326 IAC 1-2-55) of any single HAP is equal to or greater than ten (10) tons per year and the potential emissions (as defined in 326 IAC 1-2-55) of a combination HAPs is greater than or equal to twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.
- (c) Fugitive Emissions

Since this type of operation is one of the twenty-eight (28) listed source categories under 326 IAC 2-2, the fugitive particulate matter (PM) emissions are counted toward determination of PSD applicability.

Actual Emissions

The following table shows the actual emissions from the source. The actual emissions of the criteria pollutants information reflects the 1995 OAM emission data. The actual HAP emissions are from the 1996 annual emission statement supplied by the applicant.

Pollutant	Actual Emissions (tons/year)
PM	124
PM ₁₀	6.97
SO ₂	3.14
VOC	10.8
CO	1,022
NO _x	0.776
HAP (Acrolein)	0.004
HAP (Benzene)	1.01
HAP (Formaldehyde)	0.004
HAP (Naphthalene)	0.026
HAP (Phenol)	0.394
HAP (Toluene)	0.123
HAP (Xylene)	0.083
HAP (Cyanide compounds)	0.201

Limited Potential to Emit

The table below summarizes the total potential to emit, reflecting all limits, of the significant emission units.

	Limited Potential to Emit (tons/year)						
Process/facility	PM	PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs
One (1) cupola, one (1) inoculation facility, and charge handling operations	149	134	35.5	7.30	5,716	3.94	20.6
North and South pouring/cooling decks	166	166	0.788	0.394	0.00	5.52	0.615
Shakeout operations and two (2) sand mullers exhausting to baghouse (BH-1)	56.3	56.3	0.00	47.3	0.00	0.00	0.00
One (1) natural gas-fired boiler	0.461	0.461	0.036	0.334	5.10	6.07	negligible
Ten (10) isocure core machines	4.27	3.55	0.00	39.0	0.00	0.00	39.0
One (1) core wash station	0.00	0.00	0.00	77.7	0.00	0.00	0.00
One (1) pepset core machine	0.945	0.785	0.00	20.9	0.00	0.00	20.9
Two (2) whizz grinders, five (5) snag grinders, one (1) no. 1 wheelabrator spin blast, one (1) no. 2 wheelabrator spin blast, one (1) tumble blast, one (1) table blast	29.8	24.6	0.00	0.00	0.00	0.00	0.00
Insignificant Activities	10.0	10.0	5.00	10.0	5.00	10.0	5.00
Total Emissions	417	396	41.3	203	5,726	25.5	86.1

The values in the table represent the potential emissions after controls by devices required to be operating in order to determine compliance with 326 IAC 6-3 (Process Operations). The VOC emissions from the ten (10) isocure core machines are limited to 39.0 tons per year. This will also result in HAP emissions of no more than 39.0 tons per year from the ten (10) isocure core machines.

County Attainment Status

The source is located in Wells County.

Pollutant	Status
PM ₁₀	attainment
SO ₂	attainment
NO ₂	attainment
Ozone	attainment
CO	attainment
Lead	attainment

Volatile organic compounds (VOC) and oxides of nitrogen (NO_x) are precursors for the formation of ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to the ozone standards. Wells County has been designated as attainment or unclassifiable for ozone.

Federal Rule Applicability

- (a) There are no New Source Performance Standards (326 IAC 12 and 40 CFR Part 60) applicable to this source.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14 and 40 CFR Part 63) applicable to this source.

State Rule Applicability - Entire Source

326 IAC 2-2 (Prevention of Significant Deterioration)

This source is a major source pursuant to 326 IAC 2-2, PSD. See the "State Rule Applicability - Individual Facilities" section below for detailed explanations of PSD applicability for each facility.

326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting), because it has the potential to emit more than one hundred (100) tons per year of VOC, PM₁₀, and CO in Wells County. Pursuant to this rule, the owner/operator of the source must annually submit an emission statement for the source. The annual statement must be received by July 1 of each year and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8) (Emission Statement Operating Year).

326 IAC 5-1 (Visible Emissions Limitations)

Pursuant to 326 IAC 5-1-2 (Visible Emissions Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), visible emissions shall meet the following, unless otherwise stated in this permit:

- (a) Visible emissions shall not exceed an average of forty percent (40%) opacity in twenty-four (24) consecutive readings as determined by 326 IAC 5-1-4.
- (b) Visible emissions shall not exceed sixty percent (60%) opacity for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) in a six (6) hour period.

State Rule Applicability - Individual Facilities

326 IAC 2-2 (Prevention of Significant Deterioration)

- (a) Since the cupola, inoculation facilities, charge handling operations all constructed in 1976, the pouring/cooling facilities constructed in 1963 and 1968, the shakeout operations constructed in 1964, sand mullers constructed in 1972, and the boiler constructed in 1973 were all constructed prior to August 7, 1977, a PSD permit was not required for this major source.
- (b) The two (2) whizz grinders, five (5) snag grinders, one (1) no. 1 wheelabrator spin blast, one (1) no. 2 wheelabrator spin blast, one (1) tumble blast casting cleaner, and one (1) table blast casting cleaner, constructed in 1986 have a potential to emit after controls less than the PSD significance levels of each criteria pollutant. Therefore, these previously permitted facilities were considered a minor modification to an existing major source.
- (c) Since the Core Wash station being permitted under Enhanced New Source Review was constructed in 1950 which is prior to the applicability date of PSD rules, the PSD significance levels do not apply to that facility.
- (d) Since the one (1) pepset core machine, constructed in 1979 and being permitted under Enhanced New Source Review, has a potential to emit less than the PSD significance levels of each criteria pollutant, the facility is considered a minor modification to an existing major source.
- (e) The ten (10) isocore machines constructed in 1978 have the potential to emit more than 40 tons per year of VOC. The VOC emissions from these facilities will be limited to no more than 39.0 tons per consecutive twelve- (12-) month period. The usage of triethylamine shall equal the triethylamine emissions. The VOC emissions resulting from the resin usage shall be calculated by subtracting the percent reacted from the VOC input to the ten (10) isocore machines. The potential VOC emissions were calculated on page 10 of 10 of TSD Appendix A using "Form R: Reporting of Binder Chemicals Used in Foundries," by the American Foundrymen's Society, Inc. and the Casting Industry Suppliers Association. The percent reacted shall be calculated using methods acceptable by IDEM, OAM. Therefore, the facilities are considered a minor modification to an existing major source.

326 IAC 2-1-3.4 (New Source Air Toxics Control)

Since all facilities were constructed prior to July 27, 1997, the requirements of 326 IAC 2-1-3.4 do not apply.

326 IAC 6-2-3 (Particulate emission limitations for sources of indirect heating)

The allowable PM emissions from the 13.85 million British thermal unit per hour natural gas-fired boiler, constructed in 1973, are based upon the following equation:

$$Pt = (C \times a \times h) / (76.5 \times Q^{0.75} \times N^{0.25})$$

where:

Pt = Pounds of particulate matter emitted per million British thermal units (lb/MMBtu) heat input

Q = Total source maximum operating capacity rating in million British thermal units per hour (MMBtu/hr) heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility's permit application, except when some lower capacity is contained in the facility's operation permit; in which case, the capacity specified in the operation permit shall be used.

C = Maximum ground level concentration with respect to distance from the point source at the "critical" wind speed for level terrain. This shall equal 50 micrograms per cubic feet per minute meter for a period not to exceed a sixty (60) minute time period.

N = Number of stacks in fuel burning operation.

a = Plume rise factor which is used to make allowance for less than theoretical plume rise. The value 0.67 shall be used for Q less than or equal to 1,000 million British thermal units per hour heat input.

h = Stack height in feet. If a number of stacks of different heights exist, the average stack height will be computed using a weighted average of stack heights.

$$Pt = (50 \mu\text{g}/\text{m}^3 \times 0.67 \times 52 \text{ ft}) / (76.5 \times 13.85^{0.75} \times 1^{0.25}) = 3.17 \text{ lbs PM} / \text{MMBtu}$$

This number is greater than the allowable emissions stated in 326 IAC 6-2-3(e), therefore, the allowable emissions for the boiler constructed after June 8, 1972 and before September 21, 1983 shall be limited to 0.6 lbs PM per million British thermal units.

The potential PM emissions from the boiler limited to 0.6 lb PM per million British thermal units are:

$$(13.85 \text{ MMBtu/hr}) \times (8.76 \text{ hr} \times \text{MMcf}) / (\text{MMBtu} \times \text{yr}) = 121.3 \text{ MMcf/yr}$$

$$121.3 \text{ MMcf/yr} \times 7.6 \text{ lbs/MMcf} = 922 \text{ lbs/yr}$$

$$922 \text{ lbs/yr} / (13.85 \text{ MMBtu/hr} \times 8760 \text{ hrs/yr}) = 0.008 \text{ lbs PM} / \text{MMBtu}$$

Thus, the boiler will comply with the emission limitations of 326 IAC 6-2-3.

326 IAC 6-3-2(c) (Process Operations)

- (a) The particulate matter (PM) emissions from the charge handling operations shall not exceed 17.9 pounds per hour when operating at a process weight rate of 9.0 tons per hour. Since the potential to emit PM from the charge handling operations is 5.40 pounds per hour, the charge handling operations will comply with this rule.
- (b) The particulate matter (PM) emissions from the cupola shall not exceed 17.9 pounds per hour when operating at a process weight rate of 9.0 tons per hour. Since the potential to emit PM emissions after controls by the scrubber from the cupola is 12.4 pounds per hour, the cupola will comply with this rule. Compliance will be demonstrated by operating the scrubber at all times when the cupola is in operation.
- (c) The particulate matter (PM) emissions from the inoculation process shall not exceed 17.9 pounds per hour when operating at a process weight rate of 9.0 tons per hour. Since the potential to emit PM from the inoculation process is 16.2 pounds per hour, the inoculation process will comply with this rule.
- (d) The particulate matter (PM) emissions from the one (1) north pouring/cooling deck and one (1) south pouring/cooling deck shall not exceed 36.8 pounds per hour, each, when operating at a process weight rate of 26.5 tons per hour (4.5 tons of metal and 22.0 tons of sand), each. Since the potential to emit PM from the one (1) north pouring/cooling deck and one (1) south pouring/cooling deck is 18.9 pounds per hour, each, the one (1) north pouring/cooling deck and one (1) south pouring/cooling deck will comply with this rule.
- (e) The particulate matter (PM) emissions from the shakeout operations and two (2) sand mullers, exhausting to baghouse (BH-1), shall not exceed 45.1 pounds per hour when operating at a process weight rate of 53.0 tons per hour (44.0 tons of sand and 9.0 tons of metal). Since the potential to emit PM after controls by the baghouse (BH-1) is 12.9 pounds per hour, shakeout operations and two (2) sand mullers, exhausting to baghouse (BH-1), will comply with this rule. Compliance will be demonstrated by operating the baghouse (BH-1) when the shakeout operations or two (2) sand mullers are in operation.
- (f) The particulate matter (PM) emissions from the one (1) pepset core machine shall not exceed 1.96 pounds per hour when operating at a process weight rate of 0.33 tons of sand per hour. Since the potential to emit PM from the one (1) pepset core machine is 0.216 pounds per hour, the one (1) pepset core machine will comply with this rule.
- (g) The particulate matter (PM) emissions from the ten (10) isocure core machines shall not exceed 7.98 pounds per hour when operating at a process weight rate of 2.70 tons of sand per hour. Since the potential to emit PM from the ten (10) isocure core machines is 1.76 pounds per hour, the ten (10) isocure core machines will comply with this rule.

- (h) The particulate matter (PM) emissions from the one (1) core wash station shall not exceed 9.12 pounds per hour when operating at a process weight rate of 3.30 tons of sand per hour. Since the potential to emit PM from the one (1) core wash station is negligible, the one (1) core wash station will comply with this rule.
- (i) The particulate matter (PM) emissions from the two (2) whizz grinders and five (5) snag grinders exhausting to baghouses BH-3 and BH-2, respectively, shall not exceed 17.9 pounds per hour, each, when operating at a process weight rate of 9.0 tons per hour, each. The particulate matter (PM) emissions from the one (1) table blast casting cleaner exhausting to baghouse BH-4 shall not exceed 4.10 pounds per hour when operating at a process weight rate of 1.0 ton per hour. The particulate matter (PM) emissions from the one (1) no. 1 wheelabrator spin blast and one (1) no. 2 wheelabrator spin blast exhausting to baghouses BH-6 and 9, and BH-5, respectively, shall not exceed 8.56 pounds per hour when operating at a process weight rate of 3.0 tons per hour. The particulate matter (PM) emissions from the one (1) tumble blast casting cleaner exhausting to baghouses BH-7 and 8 shall not exceed 11.2 pounds per hour when operating at a process weight rate of 4.5 tons per hour. Since the potential to emit PM after controls from baghouse (BH-7) is 0.514 pounds per hour and the potential to emit PM after controls from all other baghouses is 0.900 pound per hour, the operations exhausting to baghouses BH-2 through BH-9 will comply with this rule. Compliance will be demonstrated by operating the baghouses at all times when the associated process is in operation.
- (j) The particulate matter (PM) emissions from the manufacturing activities, trimming, grinding, finishing, and blasting operations, along with the twelve (12) shell core machines, all classified as insignificant activities shall be limited by the following equation. Compliance will be demonstrated by operating the control devices at all times when the associated process is in operation.

These limitations were calculated using the following equation for the process weight rate up to sixty thousand (60,000) pounds per hour:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour, and} \\ P = \text{process weight rate in tons per hour;}$$

And the following equation for the process weight rate in excess of sixty thousand (60,000) pounds per hour:

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour, and} \\ P = \text{process weight rate in tons per hour.}$$

326 IAC 7-1 (Sulfur Dioxide Emission Limitations)

Although the cupola has the potential to emit more than 25 tons per year of SO₂, it is not a fuel combustion facility. Therefore, the requirements of 326 IAC 7-1 do not apply to this facility.

326 IAC 7-3 (Sulfur Dioxide Ambient Monitoring)

The source has actual SO₂ emissions less than ten thousand (10,000) tons per year. Therefore, the requirements of 326 IAC 7-3 do not apply to this source.

326 IAC 7-4 (Sulfur Dioxide Emission Limitations and Requirements by County)

There are no specific SO₂ requirements for Wells county. Therefore, the requirements of 326 IAC 7-4 do not apply to this source.

326 IAC 8-1-6 (New facilities; General reduction requirements)

Since all facilities with the potential to emit 25 tons or more of VOC per year were constructed prior to 1980, the requirements of 326 IAC 8-1-6 do not apply.

326 IAC 8-3-2 (Cold Cleaner Operations)

The insignificant degreasing operations are subject to the requirements of 326 IAC 8-3-2. Pursuant to this rule the owner or operator shall:

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;
- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements; and
- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

326 IAC 8-3-5 (Cold Cleaner Degreaser Operations and Control)

Since the insignificant degreasing operations existed prior to July 1, 1990, the requirements of 326 IAC 8-3-5 are not applicable.

326 IAC 8-6-1 (Organic Solvent Emission Limitations)

- (a) The one (1) core wash station was constructed in 1950, which is prior to the earliest applicability date of October 7, 1974 for 326 IAC 8-6-1 in Wells County. Therefore, the requirements of 326 IAC 8-6-1 do not apply.

- (b) Since the one (1) cupola, one (1) inoculation process, charge handling operations, ten (10) isocure core machines and one (1) pepset core machine commencing operation after October 7, 1974 and prior to January 1, 1980 have potential VOC emissions of 98.4 tons per year, which is less than 100 tons per year, the requirements of 326 IAC 8-6-1 do not apply to this source.

326 IAC 9-1 (Carbon Monoxide Emission Limits)

Since the grey iron cupola has a potential process weight rate of 9.0 tons per hour, which is less than ten (10) tons per hour, the requirements of 326 IAC 9-1 do not apply.

Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAM, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this source are as follows:

- (a) The cupola has applicable compliance monitoring conditions as specified below:
 - (1) Daily visible emission notations of the cupola stack exhaust shall be performed during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal. For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

- (2) An inspection shall be performed each calendar quarter of the scrubber controlling the cupola when venting to the atmosphere. A scrubber inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting indoors. Defective scrubber part(s) shall be replaced. In the event that a scrubber's failure has been observed:
 - (A) The affected unit will be shut down immediately until the failed unit has been replaced.
 - (B) Based upon the findings of the inspection, any additional corrective actions will be devised within eight (8) hours of discovery and will include a timetable for completion.
- (3) The Permittee shall record the bearing temperature and water pressure of the scrubber used in conjunction with the cupola at least once per day when the cupola is in operation when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the bearing temperature shall be maintained at less than 200 degrees Fahrenheit and the water pressure shall be maintained below 15.0 pounds or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

The instruments used for determining the pressure and temperature shall comply with Section C - Pressure Gauge and Temperature Sensor Specifications, of this permit, shall be subject to approval by IDEM, OAM, and shall be calibrated at least once every six (6) months.

These monitoring conditions are necessary because the scrubber for the cupola must operate properly to ensure compliance with 326 IAC 6-3 (Process Operations) and 326 IAC 2-7 (Part 70).

- (b) The inoculation process has applicable compliance monitoring conditions as specified below:

Daily visible emission notations of the inoculation emissions shall be performed during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal. For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

These monitoring conditions are necessary to ensure compliance with 326 IAC 6-3 (Process Operations) and 326 IAC 2-7 (Part 70).

- (c) The shakeout operations and two (2) sand mullers have applicable compliance monitoring conditions as specified below:

- (1) Daily visible emissions notations of the baghouse (BH-1) stack exhaust shall be performed during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.
- (2) The Permittee shall record the total static pressure drop across the baghouse (BH-1) used in conjunction with the shakeout operations and two (2) sand mullers, at least once per day when the processes are in operation when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 2.0 and 10.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAM, and shall be calibrated at least once every six (6) months.

- (3) An inspection shall be performed each calendar quarter of all bags controlling the shakeout operations and two (2) sand mullers when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting indoors. All defective bags shall be replaced.

These monitoring conditions are necessary because the baghouse for the shakeout operations and sand mullers must operate properly to ensure compliance with 326 IAC 6-3 (Process Operations) and 326 IAC 2-7 (Part 70).

- (d) The one (1) north pouring/cooling deck and one (1) south pouring/cooling deck have applicable compliance monitoring conditions as specified below:

Daily visible emissions notations of the pouring and cooling emissions shall be performed during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

These monitoring conditions are necessary to ensure compliance with 326 IAC 6-3 (Process Operations) and 326 IAC 2-7 (Part 70).

- (e) The two (2) whizz grinders, five (5) snag grinders, one (1) no. 1 wheelabrator spin blast, one (1) no. 2 wheelabrator spin blast, one (1) tumble blast casting cleaner, and one (1) table blast casting cleaner have applicable compliance monitoring conditions as specified below:

- (1) Daily visible emission notations of the baghouse (BH-2, BH-3, BH-4, BH-5, BH-6, BH7, BH-8 and BH-9) stacks exhaust shall be performed during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal. For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.
- (2) The Permittee shall record the total static pressure drop across the baghouses (BH-2, BH-3, BH-4, BH-5, BH-6, BH7, BH-8 and BH-9) used in conjunction with the two (2) whizz grinders, five (5) snag grinders, one (1) no. 1 wheelabrator spin blast, one (1) no. 2 wheelabrator spin blast, one (1) tumble blast casting cleaner, and one (1) table blast casting cleaner at least once per day when the processes are in operation when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across each baghouse shall be maintained within the range of 2.0 and 10.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAM, and shall be calibrated at least once every six (6) months.

- (3) An inspection shall be performed each calendar quarter of all bags controlling the two (2) whizz grinders, five (5) snag grinders, one (1) no. 1 wheelaborator spin blast, one (1) no. 2 wheelaborator spin blast, one (1) tumble blast casting cleaner, and one (1) table blast casting cleaner when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting indoors. All defective bags shall be replaced.

These monitoring conditions are necessary because the baghouse for the two (2) whizz grinders, five (5) snag grinders, one (1) no. 1 wheelaborator spin blast, one (1) no. 2 wheelaborator spin blast, one (1) tumble blast casting cleaner, and one (1) table blast casting cleaner must operate properly to ensure compliance with 326 IAC 6-3 (Process Operations) and 326 IAC 2-7 (Part 70).

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 187 hazardous air pollutants (HAPs) set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) Part 70 Application Form GSD-08.

- (a) This source will emit levels of air toxics greater than those that constitute major source applicability according to Section 112 of the 1990 Clean Air Act Amendments.
- (b) See page 10 of 10 of attached calculations for detailed air toxic calculations.

Conclusion

The operation of this grey iron foundry shall be subject to the conditions of the attached proposed Part 70 Permit No. T 179-6893-00005.

**Appendix A: Emission Calculations
Grey Iron Foundry**

Page 1 of 10 TSD App A

Company Name: Sterling Casting Division
Address City IN Zip: 1000 West Wiley Street, Bluffton, Indiana 46714
Part 70: T 179-6893
Plt ID: 179-00005
Reviewer: CarrieAnn Ortolani
Date: October 11, 1996

Iron Process	Throughput tons/hr	PM Control
Scrap & Charge Handling	9.00	0.0%
SCC 3-04-003-15		

	PM	PM10	PM allowable 326 IAC 6-3-2 (lbs/hr)
Emission Factors lbs/ton produced	0.6	0.36	
Percentage of Emissions	100.00%	100.00%	
Potential Emissions lbs/hr	5.40	3.24	17.9
Potential Emissions tons/yr	23.7	14.2	
Potential Emissions after Controls lbs/hr	5.40	3.24	17.9
Potential Emissions after Controls tons/yr	23.7	14.2	

Iron Melting Cupola	Throughput tons/hr	PM Control	90.0% Scrubber
SCC 3-04-003-03	9.00		

	PM	PM10	VOC	SOx	NOx	CO	PM allowable 326 IAC 6-3-2 (lbs/hr)
Emission Factors (Iron) lbs/ton produced	13.8	12.4	0.18	0.9	0.1	145	
Percentage of Emissions	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	
Potential Emissions lbs/hr	124	112	1.62	8.10	0.900	1305	17.9
Potential Emissions tons/yr	544	489	7.10	35.5	3.94	5716	
Potential Emissions after Controls lbs/hr	12.4	11.2	1.62	8.10	0.900	1305	17.9
Potential Emissions after Controls tons/yr	54.4	48.9	7.10	35.5	3.94	5716	

Natural Gas-fired Boiler	Potential Throughput
Heat Input Capacity MMBtu/hr	MMCF/yr
13.9	121.3

	Pollutant					
	PM	PM10	VOC	SO2	NOx	CO
Emission Factor in lb/MMCF	7.6	7.6	5.5	0.6	100	84
Potential Emission in tons/yr	0.461	0.461	0.334	0.036	6.07	5.10

Iron Process						
North Pouring/Cooling						
SCC 3-04-003-18						
	PM	PM10	NOx	SO2	VOC	PM allowable
Emission Factors lbs/ton produced	4.2	4.2	0.01	0.02	0.14	326 IAC 6-3-2
Percentage of Emissions	100.00%	100.00%	100.00%	100.00%	100.00%	(lbs/hr)
Potential Emissions lbs/hr	18.9	18.9	0.045	0.090	0.63	36.8
Potential Emissions tons/yr	82.8	82.8	0.197	0.394	2.76	
Potential Emissions after Controls tons/yr	82.8	82.8	0.197	0.394	2.76	

Iron Process						
South Pouring/Cooling						
SCC 3-04-003-18						
	PM	PM10	NOx	SO2	VOC	PM allowable
Emission Factors lbs/ton produced	4.2	4.2	0.01	0.02	0.14	326 IAC 6-3-2
Percentage of Emissions	100.00%	100.00%	100.00%	100.00%	100.00%	(lbs/hr)
Potential Emissions lbs/hr	18.9	18.9	0.045	0.090	0.63	36.8
Potential Emissions tons/yr	82.8	82.8	0.197	0.394	2.76	
Potential Emissions after Controls tons/yr	82.8	82.8	0.197	0.394	2.76	

Iron Process				
Shakeout				
SCC-3-04-003-31				
	PM	PM10	VOC	
Emission Factors lbs/ton produced			1.2	
Percentage of Emissions			100.00%	
Potential Emissions lbs/hr	SEE Baghouse 1		10.80	
Potential Emissions tons/yr			47.3	
Potential Emissions after Controls tons/yr			47.3	

Sand Process Two (2) Sand Mullers	Throughput tons/hr 44.00	PM Control	BH-1
	PM	PM10	
Emission Factors lbs/ton produced			
Percentage of Emissions			
Potential Emissions lbs/hr	SEE Baghouse 1		
Potential Emissions tons/yr			
Potential Emissions after Controls tons/yr			

Iron Process Baghouse Stack (BH-1)	Throughput tons/hr 53.0	PM Control	99.0%
Controlling Shakeout and Sand Mullers	PM	PM10	PM allowable
Grain Loading (gr/dcfm)	0.03	0.03	326 IAC 6-3-2
Flow Rate (acfm)	50000	50000	(lbs/hr)
Potential Emissions before Controls lbs/hr	1286	1286	45.1
Potential Emissions before controls tons/yr	5631	5631	
Potential Emissions after Controls lbs/hr	12.9	12.9	45.1
Potential Emissions after controls tons/yr	56.3	56.3	

Process		Throughput tons/hr		PM Control	0.0%
Inoculation		9.00			
SCC 3-04-003-10					
	PM	PM10	VOC	PM allowable	
Emission Factors lbs/ton produced	1.8	1.8	0.005	326 IAC 6-3-2	
Percentage of Emissions	100.00%	100.00%	100.00%	(lbs/hr)	
Potential Emissions lbs/hr	16.2	16.2	0.045	17.9	
Potential Emissions tons/yr	71.0	71.0	0.197		
Potential Emissions after Controls lbs/hr	16.2	16.2	0.045	17.9	
Potential Emissions after Controls tons/yr	71.0	71.0	0.197		

Iron Process	Throughput tons/hr			PM Control
	9.00			
Baghouse Stack (BH-2)				99.0%
Five (5) snag grinders	PM	PM10	PM allowable	
Grain Loading (gr/dcfm)	0.03	0.01	326 IAC 6-3-2	
Flow Rate (acfm)	3500	3500	(lbs/hr)	
Potential Emissions before Controls lbs/hr	90.0	30.0	17.9	
Potential Emissions before controls tons/yr	394	131		
Potential Emissions after Controls lbs/hr	0.900	0.300	17.9	
Potential Emissions after controls tons/yr	3.94	1.31		

Iron Process	Throughput tons/hr			PM Control
	9.00			
Baghouse Stack (BH-3)				99.0%
Two (2) whizz Grinders	PM	PM10	PM allowable	
Grain Loading (gr/dcfm)	0.03	0.01	326 IAC 6-3-2	
Flow Rate (acfm)	3500	3500	(lbs/hr)	
Potential Emissions before Controls lbs/hr	90.0	30.0	17.9	
Potential Emissions before controls tons/yr	394	131		
Potential Emissions after Controls lbs/hr	0.900	0.300	17.9	
Potential Emissions after controls tons/yr	3.94	1.31		

Iron Process	Throughput tons/hr		
	1.00		PM Control
Baghouse Stack (BH-4)			99.0%
One (1) table blast casting cleaner	PM	PM10	PM allowable
Grain Loading (gr/dcfm)	0.03	0.03	326 IAC 6-3-2
Flow Rate (acfm)	3500	3500	(lbs/hr)
Potential Emissions before Controls lbs/hr	90.0	90.0	4.10
Potential Emissions before controls tons/yr	394	394	
Potential Emissions after Controls lbs/hr	0.900	0.900	4.10
Potential Emissions after controls tons/yr	3.94	3.94	

Iron Process	Throughput tons/hr			PM Control	99.0%
Baghouse Stack (BH-5)	3.00				
#2 Wheelabrator spin blast	PM	PM10	326 IAC 6-3-2 (lbs/hr)		
Grain Loading (gr/dcfm)	0.03	0.03			
Flow Rate (acfm)	3500	3500			
Potential Emissions before Controls lbs/hr	90.0	90.0	8.56		
Potential Emissions before controls tons/yr	394	394			
Potential Emissions after Controls lbs/hr	0.900	0.900	8.56		
Potential Emissions after controls tons/yr	3.94	3.94			

Iron Process	Throughput tons/hr		PM Control	99.0%
Baghouse Stack (BH-6)	3.00			
#1 Wheelabrator spin blast	PM	PM10	326 IAC 6-3-2 (lbs/hr)	
Grain Loading (gr/dcfm)	0.03	0.03		
Flow Rate (acfm)	3500	3500		
Potential Emissions before Controls lbs/hr	90.0	90.0	8.56	
Potential Emissions before controls tons/yr	394	394		
Potential Emissions after Controls lbs/hr	0.900	0.900	8.56	
Potential Emissions after controls tons/yr	3.94	3.94		

Iron Process	Throughput tons/hr			PM Control	99.0%
Baghouse Stack (BH-7)	4.50				
One (1) tumble blast casting cleaner	PM	PM10	PM allowable		
Grain Loading (gr/dcfm)	0.03	0.03	326 IAC 6-3-2		
Flow Rate (acfm)	2000	2000	(lbs/hr)		
Potential Emissions before Controls lbs/hr	51.4	51.4	11.2		
Potential Emissions before controls tons/yr	225	225			
Potential Emissions after Controls lbs/hr	0.514	0.514	11.2		
Potential Emissions after controls tons/yr	2.25	2.25			

Iron Process	Throughput tons/hr		PM Control
Baghouse Stack (BH-8)	4.50		99.0%
One (1) tumble blast casting cleaner	PM	PM10	PM allowable
Grain Loading (gr/dcfm)	0.03	0.03	326 IAC 6-3-2
Flow Rate (acfm)	3500	3500	(lbs/hr)
Potential Emissions before Controls lbs/hr	90.0	90.0	11.2
Potential Emissions before controls tons/yr	394	394	
Potential Emissions after Controls lbs/hr	0.900	0.900	11.2
Potential Emissions after controls tons/yr	3.94	3.94	

Iron Process	Throughput tons/hr		PM Control
Baghouse Stack (BH-9)	3.00		99.0%
#1 Wheelabrator spin blast	PM	PM10	PM allowable
Grain Loading (gr/dcfm)	0.03	0.03	326 IAC 6-3-2
Flow Rate (acfm)	3500	3500	(lbs/hr)
Potential Emissions before Controls lbs/hr	90.0	90.0	8.56
Potential Emissions before controls tons/yr	394	394	
Potential Emissions after Controls lbs/hr	0.900	0.900	8.56
Potential Emissions after controls tons/yr	3.94	3.94	

Iron Process	Sand Throughput tons/hr	PM Control		
Ten (10) Isocure Core Machines SCC 3-04-003-50	2.70	0.0%		
Emission Factors lbs/ton	PM 0.65	PM10 0.54	VOC see page 10	PM allowable 326 IAC 6-3-2 (lbs/hr)
Percentage of Emissions	100.00%	100.00%	100.00%	
Potential Emissions lbs/hr	1.76	1.46	16.0	7.98
Potential Emissions tons/yr	7.69	6.39	70.2	
Potential Emissions after Controls lbs/hr	1.76	1.46	16.0	7.98
Potential Emissions after Controls tons/yr	7.69	6.39	70.2	

Process weight rate = 2.7 TPH of sand and resin
PM emission factors are lb/ton of sand throughput

Iron Process	Sand Throughput tons/hr	PM Control		
One (1) Pepset Core Machine SCC 3-04-003-50	0.33	0.0%		
Emission Factors lbs/ton	PM 0.65	PM10 0.54	VOC see page 10	PM allowable 326 IAC 6-3-2 (lbs/hr)
Percentage of Emissions	100.00%	100.00%	100.00%	
Potential Emissions lbs/hr	0.216	0.179	4.77	1.96
Potential Emissions tons/yr	0.945	0.785	20.9	
Potential Emissions after Controls lbs/hr	0.216	0.179	4.77	1.96
Potential Emissions after Controls tons/yr	0.945	0.785	20.9	

Process weight rate = 0.33 TPH of sand and resin
PM emission factors are lb/ton of sand throughput

Iron Process	Sand Throughput tons/hr	Metal Processed tons/hr	PM Control
Core Wash Station	3.30	9.00	0.0%

	PM	PM10	VOC
Emission Factors lbs/ton produced	0	0	1.97
Percentage of Emissions	100.00%	100.00%	100.00%
Potential Emissions lbs/hr	0.00	0.00	17.7
Potential Emissions tons/yr	0.0	0.0	77.7

Emission factor based on tons of metal processed.

SUMMARY OF EMISSIONS

Process Description	Before/After Control	PM (tons/yr)	PM10 (tons/yr)	VOC (tons/yr)	SO2 (tons/yr)	NOx (tons/yr)	CO (tons/yr)
Iron Scrap & Charge Handling	Before	23.7	14.2				
	After	23.7	14.2				
Iron Cupola	Before	544	489	7.10	35.5	3.94	5716
	After	54.4	48.9	7.10	35.5	3.94	5716
Boiler 13.85 MMBtu/hr	Before	0.461	0.461	0.334	0.036	6.07	5.10
	After	0.461	0.461	0.334	0.036	6.07	5.10
Iron North Pouring/Cooling	Before	82.8	82.8	0.197	0.394	2.76	
	After	82.8	82.8	0.197	0.394	2.76	
Iron South Pouring/Cooling	Before	82.8	82.8	0.197	0.394	2.76	
	After	82.8	82.8	0.197	0.394	2.76	
Iron Shakeout	Before	see BH-1	see BH-1	47.3			
	After	see BH-1	see BH-1	47.3			
Sand Two (2) Mullers	Before	see BH-1	see BH-1				
	After	see BH-1	see BH-1				
Baghouse Stack (BH-1)	Before	5631	5631				
	After	56.3	56.3				
Iron Inoculation	Before	71.0	71.0	0.197			
	After	71.0	71.0	0.197			
Iron One (1) Pepset Core Machine	Before	0.945	0.785	20.9			
	After	0.945	0.785	20.9			
Iron Ten (10) Isocure Core Machines	Before	7.69	6.39	70.2			
	After	7.69	6.39	70.2			
Iron Core Wash Station	Before	0.00	0.00	77.7			
	After	0.00	0.00	77.7			
Finishing Operations BH-2 through BH-9	Before	2985	2459				
	After	29.8	24.6				
TOTALS	Before	9429	8838	177	36.3	15.5	5721
	After	410	388	177	36.3	15.5	5721

**HAP Emission Calculations
Metal Foundry**

Page 10 of 10 TSD App A

Company Name: Sterling Casting Division
Address City IN Zip: 1000 West Wiley Street, Bluffton, Indiana 46714
Part 70: T 179-6893
Plt ID: 179-00005
Reviewer: CarrieAnn Ortolani
Date: October 11, 1996

HAPs From Iron Melting		HAP Emission Factor (lbs/ton)	Metal Throughput (tons/hr)	Control Eff (%)	Potential HAP Before Controls (tons/yr)	Potential HAP After Controls (tons/yr)
Lead		0.51	9.00	0.00%	20.1	20.1
Nickel		0.0009	9.00	0.00%	0.035	0.035
Chromium		0.0045	9.00	0.00%	0.177	0.177
Manganese		0.0063	9.00	0.00%	0.248	0.248

HAPs From Iron Pouring & Cooling						
Nickel		0.0009	12.00	0.00%	0.047	0.047
Chromium		0.0045	12.00	0.00%	0.237	0.237
Manganese		0.0063	12.00	0.00%	0.331	0.331

**HAPs From One (1)
Pepset Core Machine**

Material	Throughput (tons/yr)	HAP	Weight percent	Percent Evaporated	Percent Reacted	Percent Remaining	Potential Emissions (tons/yr)
Pep Set I - 1670	94	Phenol	10.00%	0.00%	90.00%	10.00%	0.940
		Napthalene	10.00%	50.00%	0.00%	50.00%	9.40
Pep Set II - 2670	105	MDI	25.00%	0.00%	99.99%	0.01%	0.003
		Napthalene	10.00%	50.00%	0.00%	50.00%	10.5

**HAPs From Ten (10)
Isocure Core Machines**

Material	Throughput (tons/yr)	HAP	weight percent	Percent Evaporated	Percent Reacted	Percent Remaining	Potential Emissions (tons/yr)
Pep Set I - 1670	290	Phenol	10.00%	0.00%	90.00%	10.00%	2.90
		Napthalene	10.00%	50.00%	0.00%	50.00%	29.0
Pep Set II - 2670	225	MDI	25.00%	0.00%	99.99%	0.01%	0.006
		Napthalene	10.00%	50.00%	0.00%	50.00%	22.5

Material	Maximum Emission Factor (lbs/ton iron)	Maximum Production Rate (tons/hr iron)	Potential Emission Rate (lbs/hr)	Potential Emission Rate (tons/yr)
Triethylamine Gas	0.4	9.00	3.6	15.8

Summary of HAPs	Potential HAP Before Controls (tons/yr)	Potential HAP After Controls (tons/yr)
-----------------	---	--

Lead	20.1	20.1
Nickel	0.083	0.083
Chromium	0.414	0.414
Manganese	0.579	0.579
Phenol	3.84	3.84
Napthalene	71.4	71.4
MDI	0.008	0.008
Triethylamine	15.8	15.8
Total	112	112

Methodology

HAP emissions from the metal

Percentage of HAPs in Metal Castings From AP-42

HAP emissions from the core making Resins

Factors from "Form R: Reporting of Binder Chemicals Used in Foundries," American Foundrymen's Society, Inc. & Casting Industry Suppliers Association

Potential emissions are the combination of the evaporative losses and the HAP remaining unreacted.

HAPs remaining in the core after the initial reaction from core making may be emitted during a later process.

The triethylamine emission factor was provided by the applicant.

Indiana Department of Environmental Management Office of Air Management

Addendum to the Technical Support Document for a Part 70 Operating Permit

Source Name: Sterling Casting Division
Source Location: 1000 West Wiley Street, Bluffton, Indiana 46714
County: Wells
SIC Code: 3321
Operation Permit No.: T 179-6893-00005
Permit Reviewer: CarrieAnn Ortolani

On October 13, 1998, the Office of Air Management (OAM) had a notice published in the Bluffton New Banner, Bluffton, Indiana, stating that Sterling Casting Division had applied for a Part 70 Operating Permit to operate a grey iron foundry with control. The notice also stated that OAM proposed to issue a Part 70 Operating Permit for this operation and provided information on how the public could review the proposed Part 70 Operating Permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this Part 70 Operating Permit should be issued as proposed.

On October 26, 1998, Terry A. Eltzroth, Plant Superintendent, Sterling Casting, submitted comments on the proposed Part 70 Operating Permit. Where the permit language is changed, deleted language appears as ~~strikeouts~~, new language is **bolded**. The comments are as follows:

Comment 1:

A.1, page 6, Responsible Official: Revise to Terry A. Eltzroth, Plant Superintendent.

Comment 2:

A.1, page 6, Mailing Address: Revise to P.O. Box 396, Bluffton, Indiana 46714.

Responses 1 & 2:

Section A.1 has been revised as follows:

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

The Permittee owns and operates a stationary grey iron foundry source.

Responsible Official: ~~Perry R. Pine~~ **Terry A. Eltzroth**
 Source Address: 1000 West Wiley Street, Bluffton, Indiana 46714
 Mailing Address: ~~1000 West Wiley Street, Bluffton, Indiana 46714~~
 P.O. Box 396, Bluffton, Indiana 46714
 SIC Code: 3321
 County Location: Wells
 County Status: Attainment for all criteria pollutants
 Source Status: Part 70 Permit Program
 Major Source, under PSD Rules;
 Major Source, Section 112 of the Clean Air Act

The mailing address in each of the forms at the back of the permit has been revised as follows:

Mailing Address: ~~4000 West Wiley Street, Bluffton, Indiana 46714~~
P.O. Box 396, Bluffton, Indiana 46714

Comment 3:

A.2(b), page 6, Inoculation: Please delete the reference to "process" and to maximum capacity. Inoculation is accomplished by the furnace operator adding by hand a scoop (or scoops) of the inoculant material to the ladle as the melt moves from the holding furnace to the pour station.

Response 3:

Process is defined by 326 IAC 1-2-58 as "any action, operation, or treatment and the equipment used in connection therewith, and all methods or forms of manufacturing or processing that may emit air contaminants." Since the inoculation is an action that may emit air contaminants, the word "process" will not be removed from the description. In addition, 9 tons of metal per hour is the maximum amount processed. Therefore, Section A.2, item (b), has been revised as follows:

- (b) One (1) inoculation process, identified as 150, constructed in 1976, **inoculating with** a maximum ~~capacity~~ of 9.0 tons of metal per hour.

Comment 4:

A.2(d), page 6, Mullers: Please delete the reference to a capacity limitation associated with metal amounts. When one unit is out of service for maintenance, the other muller can supply all molding sand requirements.

Response 4:

Section A.2 item (d) has been revised as follows:

- (d) Two (2) sand mullers, identified as 320, constructed in 1972, with a maximum capacity of 200 tons of sand per hour, but limited by the metal capacity to ~~22~~ **44** tons of sand per hour, ~~each~~ **total**, exhausting through a baghouse (BH-1).

Comment 5:

A.2(g), page 6, Shakeout: It is recommended that additional detail be added to identify that only the casting shakeout unit vents to baghouse BH-1. The two vibrating conveyors that feed the shakeout unit do not vent to a dust collector.

Response 5:

Section A.2 item (g) has been revised as follows:

- (g) Shakeout operations consisting of two (2) vibrating conveyors, **not equipped with a control device**, discharging to one (1) shakeout facility, identified as 450/460, constructed in 1964, with a maximum capacity of 9.0 tons of metal and 44.0 tons of sand per hour, exhausting through a baghouse (BH-1).

Comment 6:

A.2(i), page 7, Snag Grinders: Snag grinders 1 through 6 vent to baghouse BH-2. Please clarify that the capacity of 9.0 tons of metal per hour relates to all six grinders, not 9 tons per hour capacity per grinder.

Response 6:

Section A.2, item (i), has been revised as follows:

- (i) ~~Five (5)~~ **Six (6)** snag grinders, constructed in 1986, with ~~a capacity capacities~~ of 9.0 tons of metal per hour, ~~total each~~, and exhausting to baghouse (BH-2).

Comment 7:

A.2(j), page 7, Whizz Grinder: Please revise that there is now one whizz grinder (capacity 2.0 tons per hour) and it vents to baghouse BH-3.

Response 7:

Section A.2, item (j), has been revised as follows:

- (j) ~~Two (2)~~ **One (1)** whizz grinders, constructed in 1986, with ~~a capacity capacities~~ of ~~9-0~~ **2.0** tons of metal per hour, ~~each~~, and exhausting to baghouse (BH-3).

As a result of this change, Condition D.4.1(a) has been revised as indicated in Response 17.

Comment 8:

A.2(p), page 7, Core Wash: Please delete the reference to 3.3 tons sand (cores) per hour maximum capacity. These units can consist of tubs, cans buckets or pails containing wash solution. The largest unit on a wash solution basis is 30" wide by 42" long with a liquid height of 16".

Response 8:

Section A.2, item (p) has been revised as follows:

- (p) One (1) core wash station, identified as 260, constructed in 1950, with a maximum **wash solution unit of 30 inches wide, 42 inches long, and a liquid height of 16 inches.** ~~capacity of 3.3 tons of sand per hour.~~

Comment 9:

D.1(b), page 32, Inoculation: Please delete the reference to "process" and to maximum capacity. Inoculation is accomplished by the furnace operator adding by hand a scoop (or scoops) of the inoculant material to the ladle as the melt moves from the holding furnace to the pour station.

Response 9:

See Response 3.

Comment 10:

D.1.8, page 33, Cupola Scrubber Monitoring: Please substitute main scrubber blower drive motor amperage and circulation water system line pressure as the monitoring parameters. The drive motor amperage range scale is zero to 300. The unit normally operates at approximately 260 amps. A lower value at approximately 200 amps would indicate that attention is needed concerning possible plugging, fouling or other operational concerns.

The water line pressure at an efficient gauge point would be above 15 psi. This would provide for additional lift to the scrubber nozzles which are designed to operate on 15 pounds water pressure.

Response 10:

Condition D.1.8 (now D.1.12) has been revised as follows:

D.1.812 Parametric Monitoring

The Permittee shall record the ~~bearing temperature~~ **main scrubber blower drive motor amperage** and water pressure of the scrubber used in conjunction with the cupola at least once per day when the cupola is in operation when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the ~~bearing temperature~~ **main scrubber blower drive motor amperage** shall be maintained at **no** less than 200 ~~amps degrees Fahrenheit~~ and the **circulation water system line** pressure shall be maintained ~~below~~ **above** 15.0 pounds **per square inch** or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

The instruments used for determining the pressure and ~~temperature~~ **amperage** shall comply with Section C - Pressure Gauge and ~~Temperature Sensor~~ **Amperage** Specifications, of this permit, shall be subject to approval by IDEM, OAM, and shall be calibrated at least once every six (6) months.

As a result of this change, Condition C.12 has been revised as follows:

C.12 Pressure Gauge and ~~Temperature Sensor~~ **Amperage** Specifications

Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device or the ~~temperature~~ **amperage** at any part of the unit or its control device, the gauge employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent ($\pm 2\%$) of full scale reading.

Comment 11:

D.1.9(c)(1)(B), page 34, Record Keeping, Cupola Scrubber: Please substitute main scrubber blower drive motor amperage for "Bearing Temperature".

Response 11:

Condition D.1.9(c) (now D.1.13(c)) has been revised as follows:

- (c) To document compliance with Condition ~~D.1.8~~**D.1.12**, the Permittee shall maintain the following:
- (1) Daily records of the following operational parameters during normal operation when venting to the atmosphere:
 - (A) Water pressure; and
 - (B) ~~Bearing temperature.~~ **Main scrubber blower drive motor amperage.**
 - (2) Documentation of all response steps implemented, per event.
 - (3) Operation and preventive maintenance logs, including work purchases orders, shall be maintained.
 - (4) Quality Assurance/Quality Control (QA/QC) procedures.
 - (5) Operator standard operating procedures (SOP).
 - (6) Manufacturer's specifications or its equivalent.
 - (7) Equipment "troubleshooting" contingency plan.
 - (8) Documentation of the dates vents are redirected.

Comment 12:

D.2(d), page 35, Mullers: Please delete the reference to a capacity limitation associated with metal amounts.

Response 12:

See Response 4.

Comment 13:

D.2(g), page 35, Shakeout: It is recommended that additional detail be added to identify that only the casting shakeout unit vents to baghouse BH-1. The two vibrating conveyors that feed the shakeout unit do not vent to a dust collector.

Response 13:

See Response 5.

Comment 14:

D.2.9(b)(1)(B), page 37, Record Keeping, Dust Collector BH-1: Please delete this item. This unit does not have a cleaning cycle variation capability other than on/off.

Response 14:

Condition D.2.9(b) has been revised as follows:

- (b) To document compliance with Condition D.2.6, the Permittee shall maintain the following:
- (1) Daily records of the following operational parameters during normal operation when venting to the atmosphere:
 - ~~(A) Inlet and outlet differential static pressure, and~~
 - ~~(B) Cleaning cycle: frequency and differential pressure.~~
 - (2) Documentation of all response steps implemented, per event.
 - (3) Operation and preventive maintenance logs, including work purchases orders, shall be maintained.
 - (4) Quality Assurance/Quality Control (QA/QC) procedures.
 - (5) Operator standard operating procedures (SOP).
 - (6) Manufacturer's specifications or its equivalent.
 - (7) Equipment "troubleshooting" contingency plan.
 - (8) Documentation of the dates vents are redirected.

Comment 15:

D.2(i), page 40, Snag Grinders: The snag grinders are identified as units 1 through 6 vent (total of 6 machines). Please clarify that the capacity of 9.0 tons of metal per hour relates to all six grinders, not 9 tons per hour capacity per grinder.

Response 15:

See Response 6.

Comment 16:

D.2(j), page 40, Whizz Grinder: Please revise that there is now only one whizz grinder.

Response 16:

See Response 7.

Comment 17:

D.4.4, page 41, Grinders: Please revise to six snag grinders and one whizz grinder.

Response 17:

Conditions D.4.1(a) and D.4.4 have been revised as follows:

D.4.1 Particulate Matter (PM) [326 IAC 6-3-2(c)]

(a) Pursuant to 326 IAC 6-3-2(c) (Process Operations):

- (1)** the allowable particulate matter (PM) emissions from the ~~two (2) whizz grinders and five (5)~~ **total of the six (6)** snag grinders exhausting to baghouses BH-3 and BH-2, respectively, shall not exceed 17.9 pounds per hour, ~~each~~, when operating at a process weight rate of 9.0 tons per hour; ~~each~~;
- (2)** **The particulate matter (PM) emissions from the one (1) whizz grinder exhausting to baghouse BH-3 shall not exceed 6.52 pounds per hour when operating at a process weight rate of 2.0 tons per hour;**
- (3)** The particulate matter (PM) emissions from the one (1) table blast casting cleaner exhausting to baghouse BH-4 shall not exceed 4.10 pounds per hour when operating at a process weight rate of 1.0 ton per hour;
- (4)** The particulate matter (PM) emissions from the one (1) no. 1 wheelaborator spin blast and one (1) no. 2 wheelaborator spin blast exhausting to baghouses BH-6 and 9, and BH-5, respectively, shall not exceed 8.56 pounds per hour when operating at a process weight rate of 3.0 tons per hour; **and**
- (5)** The particulate matter (PM) emissions from the one (1) tumble blast casting cleaner exhausting to baghouses BH-7 and 8 shall not exceed 11.2 pounds per hour when operating at a process weight rate of 4.5 tons per hour.

The pounds per hour limitations were calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour.}$$

D.4.4 Particulate Matter (PM)

The baghouses (BH-2, BH-3, BH-4, BH-5, BH-6, BH-7, BH-8 and BH-9) for PM control shall be in operation at all times when the ~~two (2)~~ **one (1)** whizz grinders, ~~five (5)~~ **six (6)** snag grinders, one (1) no. 1 wheelabrator spin blast, one (1) no. 2 wheelabrator spin blast, one (1) tumble blast casting cleaner, and one (1) table blast casting cleaner are in operation.

Comment 18:

D.4.6, page 41, Dust Collectors: These units operate under manual control. The shaker system used to help separate dust from bags is turned on as the air flow from the operating device is turned off. This normally takes place during breaks and at lunch time, equipment servicing and other down times.

It would not be expected that the baghouse would show a 2" to 10" differential pressure with the air flow turned off.

Response 18:

Condition D.4.6, Parametric Monitoring, only requires pressure drop readings when the one (1) whizz grinder, six (6) snag grinders, one (1) no. 1 wheelabrator spin blast, one (1) no. 2 wheelabrator spin blast, one (1) tumble blast casting cleaner, and one (1) table blast casting cleaner are in operation.

Condition D.4.6 has been revised as follows:

D.4.6 Parametric Monitoring

The Permittee shall record the total static pressure drop across the baghouses (BH-2, BH-3, BH-4, BH-5, BH-6, BH-7, BH-8 and BH-9) used in conjunction with the **one (1)** ~~two (2)~~ whizz grinders, ~~five (5)~~ **six (6)** snag grinders, one (1) no. 1 wheelabrator spin blast, one (1) no. 2 wheelabrator spin blast, one (1) tumble blast casting cleaner, and one (1) table blast casting cleaner at least once per day when the ~~processes~~ **facilities** are in operation when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across each baghouse shall be maintained within the range of 2.0 and 10.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge **and Amperage** Specifications, of this permit, shall be subject to approval by IDEM, OAM, and shall be calibrated at least once every six (6) months.

Comment 19:

D.4.7, page 42, Baghouse Inspections: Please revise to six snag grinders and one whizz grinder.

Response 19:

Condition D.4.7 has been revised as follows:

D.4.7 Baghouse Inspections

An inspection shall be performed each calendar quarter of all bags controlling the ~~two (2)~~ **one (1)** whizz grinders, ~~five (5)~~ **six (6)** snag grinders, one (1) no. 1 wheelabrator spin blast, one (1) no. 2 wheelabrator spin blast, one (1) tumble blast casting cleaner, and one (1) table blast casting cleaner when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting indoors. All defective bags shall be replaced.

Comment 20:

D.4.9(b)(1)(B), page 42, Record Keeping, Dust Collectors: Please delete this item. This unit does not have a cleaning cycle variation capability other than on/off.

Response 20:

Condition D.4.9(b) has been revised as follows:

- (b) To document compliance with Condition D.4.6, the Permittee shall maintain the following:
- (1) Daily records of the following operational parameters during normal operation when venting to the atmosphere:
 - ~~(A) Inlet and outlet differential static pressure, and~~
 - ~~(B) Cleaning cycle: frequency and differential pressure.~~
 - (2) Documentation of all response steps implemented, per event.
 - (3) Operation and preventive maintenance logs, including work purchases orders, shall be maintained.
 - (4) Quality Assurance/Quality Control (QA/QC) procedures.
 - (5) Operator standard operating procedures (SOP).
 - (6) Manufacturer's specifications or its equivalent.
 - (7) Equipment "troubleshooting" contingency plan.
 - (8) Documentation of the dates vents are redirected.

Comment 21:

D.5.7(a)(3), page 45, Record Keeping, Resin Use: Please delete the requirement for "A Log of the Dates of Use". The monthly records keeping can be accomplished from purchasing and inventory records.

Response 21:

Condition D.5.7(a) has been revised as follows:

- (a) To document compliance with Condition D.5.1, the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC usage limits and the VOC emission limits established in Conditions D.5.1.
- (1) The amount and VOC content of each resin. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.
- ~~(2) A log of the dates of use.~~
- ~~(3)~~(2) The total VOC usage for each month; and
- ~~(4)~~(3) The weight of VOCs emitted for each compliance period.

Comment 22:

D.6(p), page 46, Core Wash: During this operation, completed cores are washed in a liquid solution. It is not expected that there would be any resulting particulate emissions.

Response 22:

Since there are no particulate emissions from the core wash station, Conditions D.6.1 and D.6.2 have been removed from the permit. Condition D.6.3 has been renumbered D.6.1.

On November 5, 1998, Sam Portanova of EPA Region 5 submitted comments on the proposed Part 70 Operating Permit. The comments are as follows:

Comment 23:

Several units were constructed in 1986 at this source and the permit says that these units limited their emissions to stay out of PSD. However, the permit's TSD shows the potential emissions from these units to be 29.8 tons per year of PM, which is above the PSD threshold. Is this a typo? What was the limit in their 1986 permit? Doesn't section D.4 need to include a synthetic minor construction permit limit?

Response 23:

The units constructed in 1986 are the cleaning and finishing operations permitted by OP 90-06-89-0077, issued on January 21, 1987. That permit does not contain a limit for PM emissions because the emissions from these units were calculated using the AP-42 emission factor for cleaning and finishing of 16.7 pounds of PM per ton of metal charged plus 0.1 pound PM per ton of metal charged as fugitive emissions. Therefore, potential non-fugitive emissions were 658 tons per year ($16.7 \text{ lbs/ton} * 9 \text{ tons/hr} * 8,760 \text{ hrs/yr} / 2,000 \text{ lbs/ton} = 658 \text{ tons/yr}$) and potential fugitive emissions were 3.94 tons per year ($0.1 \text{ lb/ton} * 9 \text{ tons/hr} * 8,760 \text{ hrs/yr} / 2,000 \text{ lbs/ton} = 3.94 \text{ tons/yr}$ (0.9 lbs/hr)). Using control devices with control efficiencies of 99%, the potential emissions after controls were computed to be 10.5 tons per year ($6.58 \text{ tons/yr} * (100-99)\% + 3.94 \text{ tons/yr} = 10.5 \text{ tons/yr}$). Therefore, no emission limitation was required to result in PM emissions less than 25 tons per year. These facilities were required to comply with the requirements of 326 IAC 6-3. There were no short-term limits and no minimum control efficiency requirements in the permit to ensure that the facilities are a minor modification to an existing major source. For that purpose, a short-term limit will be included in this permit. The current AP-42 emission factor for cleaning and finishing operations is 17 pounds of PM per ton of metal processed. The resulting calculations are as follows:

Potential Emissions:

9 tons of metal produced per hour * 17 pounds of PM per ton of metal produced = 153 lbs PM /hr
 $153 \text{ lbs PM/hr} * 8,760 \text{ hrs/yr} / 2,000 \text{ lbs/ton} = 670 \text{ tons of PM per year.}$

Controlled Emissions:

$670 \text{ tons/yr} * (1-.99) = 6.70 \text{ tons/yr}$
 $153 \text{ lbs/hr} * (1-.99) = 1.53 \text{ lbs/hr}$

Therefore, the emissions calculated using either emission factor shows that the equipment has not emitted 25 tons per year or more of PM or 15 tons per year or more of PM₁₀, and the emissions calculated using the baghouse parameters are overly conservative. According to these calculations, the cleaning and finishing operations constructed in 1986 are minor modifications to an existing major source pursuant to 326 IAC 2-2, PSD. In order to ensure that future emissions are not greater than or equal to 25 tons per year of PM or 15 tons per year of PM₁₀, including fugitive emissions (0.9 pound per hour in calculations for previous permit), the following limitation has been added to the permit as Condition D.4.1(b) and the rule cite [326 IAC 2-2] has been added to Condition D.4.1:

- (b) The PM emissions shall not exceed 4.8 pounds per hour and PM₁₀ emissions shall not exceed 2.5 pounds per hour. This condition and Condition D.4.4, along with the compliance monitoring requirements, and record keeping and reporting requirements limit the potential to emit PM and PM₁₀, including fugitive emissions, to less than 25 tons per year and 15 tons per year, respectively, and the requirements of 326 IAC 2-2, Prevention of Significant Deterioration, are not applicable.**

Comment 24:

The pepset core machines and the isocore core machines were CWOP/OWOP. They are now adding synthetic minor limits to these sources. Did these units ever emit actual emissions above the PSD threshold? If so, then these sources have triggered PSD in the past and should be subject to BACT requirements.

Response 24:

A limit only applies to the ten (10) isocure core machines with potential VOC emissions greater than 40 tons per year and no control device. The potential uncontrolled PM emissions are 7.69 tons per year, which is less than the PSD threshold of 25 tons per year, and no PM limit is required for this facility. The VOC emission limit is contained in the permit as Condition D.5.1. Sterling Casting Division has supplied maximum operating hours for the ten (10) isocure core machines. All ten machines are operated 8 hours per day, 5 days per week, 52 weeks per year. This totals 2,080 annual operating hours. Two (2) machines are operated a second 8 hour shift per day. Sterling Casting Division specifies that the second shift emissions are about 20% of the first shift emissions. Conservatively, using operating hours of 4,160 hours per year (two (2) shifts per day), the ten (10) isocure core machines have not exceeded VOC emissions of 39 tons per year and the requirements of 326 IAC 2-2, PSD, and BACT are not applicable to previous operations. This is illustrated in the following calculation:

Potential Emissions = 70.2 tons per year
Potential Operating Hours = 8,760 hours per year
Maximum Operating Hours = 4,160 hours per year

$(4,160 \text{ hrs/yr} / 8,760 \text{ hrs/yr}) * 70.2 \text{ tons/yr} = 33.3 \text{ tons/yr}$

As explained in the TSD, the usage of triethylamine shall equal the triethylamine emissions, and the VOC emissions resulting from the resin usage shall be calculated by subtracting the percent reacted from the VOC input to the ten (10) isocure core machines. The potential VOC emissions were calculated on page 10 of 10 of TSD Appendix A using "Form R: Reporting of Binder Chemicals Used in Foundries," by the American Foundrymen's Society, Inc. and the Casting Industry Suppliers Association. The percent reacted shall be calculated using methods acceptable to IDEM, OAM. Condition D.5.1 has been revised for clarification as follows:

D.5.1 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]

The input of resin and triethylamine to the ten (10) isocure core machines shall be limited such that the potential to emit VOC does not exceed 39 tons per twelve (12) consecutive month period. Therefore, the requirements of 326 IAC 2-2, Prevention of Significant Deterioration, are not applicable. **The VOC emissions shall be computed as follows:**

VOC emissions = triethylamine usage + (resin usage - (resin usage * % resin reacted))

The percent resin reacted shall be determined using "Form R: Reporting of Binder Chemicals Used in Foundries," by the American Foundrymen's Society, Inc. and the Casting Industry Suppliers Association or other methods acceptable to IDEM, OAM.

Comment 25:

Section D.7 does not include any synthetic minor limits for the pepset core machine. Is a limit necessary or is the maximum PTE of this unit already below all PSD thresholds?

Response 25:

As stated in the TSD, the potential VOC emissions from the pepset core machine are 20.9 tons per year when operating at maximum capacity. The potential PM emissions at maximum capacity are 0.945 tons per year. Since these uncontrolled potentials are less than the PSD thresholds, no limits are required. Therefore, this unit is a minor modification to an existing major source pursuant to 326 IAC 2-2, PSD.

Upon further review, the OAM has decided to make the following changes to the Part 70 Operating Permit:

Change 1:

Condition C.2 has been revised as follows:

C.2 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (~~Visible Emissions~~ **Opacity** Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), ~~visible emissions~~ opacity shall meet the following, unless otherwise stated in this permit:

- (a) ~~Visible emissions~~ **Opacity** shall not exceed an average of forty percent (40%) ~~opacity~~ in ~~twenty-four (24) consecutive readings~~, **any one (1) six (6) minute averaging period** as determined in 326 IAC 5-1-4.
- (b) ~~Visible emissions~~ **Opacity** shall not exceed sixty percent (60%) ~~opacity~~ for more than a cumulative total of fifteen (15) minutes (sixty (60) readings **as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor**) in a six (6) hour period.

Change 2:

Conditions D.2.8 and D.4.8 have been revised as follows:

D.2.8 Broken Bag or ~~Failure~~ Failed Bag Detection

In the event that bag failure has been observed:

- (a) The affected compartments will be shut down immediately until the failed units have been repaired or replaced. ~~For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced.~~ **Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).**

- (b) ~~Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion.~~ **For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).**

D.4.8 Broken Bag or Failure ~~Failed Bag~~ Detection

- (a) ~~The affected compartments will be shut down immediately until the failed units have been repaired or replaced. For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced.~~ **Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).**
- (b) ~~Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion.~~ **For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).**

Change 3:

The IDEM now believes that Condition B.28, Credible Evidence, is not necessary and has removed it from the permit. The issues regarding credible evidence can be adequately addressed during a showing of compliance or noncompliance. Indiana's statutes, and the rules adopted under their authority, govern the admissibility of evidence in any proceeding. Indiana law contains no provisions that limit the use of any credible evidence and an explicit statement is not required in the permit. Therefore, Condition B.28 has been removed from the permit.

~~B.28 Credible Evidence [326 IAC 2-7-5(3)][62 Federal Register 8313][326 IAC 2-7-6]~~

~~Notwithstanding the conditions of this permit that state specific methods that may be used to assess compliance or noncompliance with applicable requirements, other credible evidence may be used to demonstrate compliance or non-compliance.~~

Change 4:

Condition D.1.5 (now D.1.8) has been revised as follows:

D.1.58 Particulate Matter (PM)

The scrubber for PM control shall be in operation at all times when the cupola is in operation and exhausting to the outside atmosphere.

Change 5:

To better define the capacity of the cupola, item (a) of Section A.2 and the cupola description in Section D.1 have been revised as follows:

- (a) One (1) cupola, identified as 110, constructed in 1976, with a maximum **charge** capacity of 9.0 tons of metal per hour, using a wet scrubber as control, and exhausting to stack SCR1.

Change 6:

Since cupolas must be tested once every two and a half years (2.5 years), Condition D.1.4 (now D.1.6) has been revised as follows:

D.1.46 Testing Requirements [326 IAC 2-7-6(1),(6)]

During the period between 30 and 36 months after issuance of this permit, the Permittee shall perform PM testing on the cupola scrubber to demonstrate compliance with Condition D.1.1 utilizing a method applicable to this facility. This test shall be repeated at least once every **two and a half (2.5) five (5)** years from the date of this valid compliance demonstration. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.

Change 7:

The charge capacity of the cupola is 9.0 tons of metal per hour. According to Sterling Casting Division, the typical batch melted consists of 1,500 pounds of metal and 286 pounds of additives and flux. Therefore, the total average process weight rate is 1,786 pounds per hour. To ensure compliance with the requirements of 326 IAC 9-1 (Carbon Monoxide Emission Limits), the following condition has been added to the permit, and Section D.1 has been renumbered accordingly:

D.1.2 Carbon Monoxide (CO) Emission Limits [326 IAC 9-1]

Any change or modification that increases the process weight rate of the cupola to 10 tons per hour or more, including all charge ingredients, will cause the cupola to be subject to the requirements of 326 IAC 9-1, Carbon Monoxide Emission Limits.

Change 8:

The determination on the applicability of 326 IAC 7-1 (Sulfur Dioxide Emission Limitations) is incorrect for the cupola. Pursuant to 326 IAC 7-1.1-2, the cupola is limited to SO₂ emissions of 6.0 pounds per million British thermal units. When Sterling Casting Division melts 1,500 pounds of metal, the cupola uses 200 pounds of coke with a heat content of 14,250 British thermal units per pound. Therefore the total heat input required to melt 1,500 pounds of metal is 2.85 million British thermal units per hour, or 3.8 million British thermal units per pound of metal melted. As shown on page 1 of 10 of TSD Appendix A, the emission factor for SO₂ is 0.9 pound per ton of metal produced. According to this emission factor, the SO₂ emissions when 1,500 pounds of metal are produced are 0.675 pound of SO₂ per 2.85 million British thermal units, which equals 0.237 pound per million British thermal unit. Therefore, the cupola will comply with the requirements of 326 IAC 7-1. However, compliance will be determined by coke sampling and analysis since that will provide an accurate compliance determination for coke used in this particular cupola. The following condition has been added to the permit, and Section D.1 has been renumbered accordingly.

D.1.3 Sulfur Dioxide (SO₂) Emission Limitations [326 IAC 7-1.1-2]

Pursuant to 326 IAC 7-1.1-2 (SO₂ Emissions Limitations) the SO₂ emissions from the cupola shall not exceed six (6.0) pounds per million British thermal units.

In addition, the following coke sampling and analysis requirements have been added to Section D.1:

D.1.7 Sulfur Dioxide Emissions and Sulfur Content [326 IAC 2-7-5(3)(A)] [326 IAC 2-7-6]

Pursuant to 326 IAC 7-2, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed six (6.0) pounds per million British thermal units. Compliance shall be determined utilizing one of the following options:

- (a) Providing vendor analysis of coke delivered, if accompanied by a certification from the fuel supplier, as described under 40 CFR 60.48c(f)(3). The certification shall include:**
 - (1) The name of the coke supplier; and**
 - (2) The location of the coke when the sample was collected for analysis to determine the properties of the coke, specifically including whether the coke was sampled as delivered to the affected facility or whether the coke was collected from coke in storage at a coke preparation plant, at a coke supplier's facility, or at another location. The certification shall include the name of the coke plant, coke storage facility, or another location (where the sample was collected); and**
 - (3) The results of the analysis of the coke from which the shipment came (or of the shipment itself) including the sulfur content, moisture content, ash content, and heat content; and**
 - (4) The methods used to determine the properties of the coke; or**
- (b) Sampling and analyzing the coke by using one of the following procedures:**

- (1) **Minimum Coke Sampling Requirements and Analysis Methods:**
 - (A) **The coke sample acquisition point shall be at a location where representative samples of the total coke flow to be combusted by the facility or facilities may be obtained. A single as-bunkered or as-burned sampling station may be used to represent the coke to be combusted by multiple facilities using the same stockpile feed system;**
 - (B) **Coke shall be sampled at least one (1) time per day;**
 - (C) **Minimum sample size shall be five hundred (500) grams;**
 - (D) **Samples shall be composited and analyzed at the end of each calendar quarter;**
 - (E) **Preparation of the coke sample, heat content analysis, and sulfur content analysis shall be determined pursuant to 326 IAC 3-7-2(c), (d), (e); or**
- (2) **Sample and analyze the coke pursuant to 326 IAC 3-7-3; or**
- (c) **Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the cupola, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6, which is conducted with such frequency as to generate the amount of information required by (a) or (b) above. [326 IAC 7-2-1(b)]**

A determination of noncompliance pursuant to any of the methods specified in (a), (b), or (c) above shall not be refuted by evidence of compliance pursuant to the other method.

Change 9:

Because of changes 7 and 8, Condition D.1.9 (now D.1.13) has been revised as follows:

D.1.913 Record Keeping Requirements

- (a) To document compliance with Condition D.1.1 and ~~D.1.6~~**D.1.9**, the Permittee shall maintain records of daily visible emission notations of the cupola stack and inoculation emissions.
- (b) To document compliance with Condition D.1.1 and ~~D.1.7~~**D.1.10**, the Permittee shall maintain the records of the results of the inspections required under Condition ~~D.1.7~~**D.1.10** and the dates the vents are redirected.
- (c) To document compliance with Condition ~~D.1.8~~**D.1.12**, the Permittee shall maintain the following:

- (1) Daily records of the following operational parameters during normal operation when venting to the atmosphere:
 - (A) Water pressure; and
 - (B) Main scrubber blower drive motor amperage.
 - (2) Documentation of all response steps implemented, per event.
 - (3) Operation and preventive maintenance logs, including work purchases orders, shall be maintained.
 - (4) Quality Assurance/Quality Control (QA/QC) procedures.
 - (5) Operator standard operating procedures (SOP).
 - (6) Manufacturer's specifications or its equivalent.
 - (7) Equipment "troubleshooting" contingency plan.
 - (8) Documentation of the dates vents are redirected.
- (d) To document compliance with Condition D.1.3 and D.1.7, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the SO₂ emission limits established in D.1.3.**
- (1) Calendar dates covered in the compliance determination period; and**
 - (2) Actual coke usage since last compliance determination period; and**
 - (3) Sulfur content, heat content, and ash content; and**
 - (4) Sulfur dioxide emission rates; and**
 - (5) Vendor analysis of coke and coke supplier certification, if the vendor analysis is used to determine compliance.**
- ~~(d)~~**(e)** All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

Change 10:

A scrubber failure detection condition has been added to Section D.1 as Condition D.1.11, and the remainder of Section D.1 has been renumbered accordingly.

D.1.11 Failure Detection

In the event that a scrubber failure has been observed:

Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Change 11:

Condition D.3.3 has been revised to clarify that it is requiring the Natural Gas Fired Boiler Certification.

D.3.3 Reporting Requirements (Natural Gas Certification)

The Permittee shall certify within thirty (30) days after the end of the quarter being reported, using the **Natural Gas Fired Boiler Certification form** located at the end of this permit, or its equivalent, which fuels were fired in the boilers during the report period and the dates of use.

Change 12:

Condition D.5.1 has been revised for clarity as follows:

D.5.1 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]

The input of resin and triethylamine to the ten (10) isocure core machines shall be limited such that the potential to emit VOC does not exceed 39 tons per twelve (12) consecutive month period. **Therefore, the requirements of 326 IAC 2-2, Prevention of Significant Deterioration, are not applicable.**

Change 13:

Pursuant to 326 IAC 6-3-2(c), the hourly PM emissions from the shakeout operations and two (2) sand mullers shall be limited separately although the operations exhaust to the same baghouse. The process weight rate of the shakeout operations is 53.0 tons per hour (44.0 tons per hour of sand and 9.0 tons per hour of metal). Therefore, the shakeout operations will be limited to PM emissions of 45.1 pounds per hour. The process weight rate of the two (2) sand mullers is 22.0 tons of sand per hour, each. Therefore, each sand muller will be limited to PM emissions of 32.5 pounds per hour. Since the total PM emissions after control from baghouse BH-1 is only 12.9 pounds per hour, the shakeout operations and two (2) sand mullers will comply with this rule. Condition D.2.1 has been revised as follows:

D.2.1 Particulate Matter (PM) [326 IAC 6-3-2(c)]

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- (a) Pursuant to 326 IAC 6-3-2(c) (Process Operations), the allowable PM emission rate from the shakeout operations **shall not exceed 45.1 pounds per hour when operating at a process weight rate of 53.0 tons per hour (44.0 tons of sand and 9.0 tons of metal)** and the allowable PM emission rate from each of the two (2) sand mullers **shall not exceed 32.5 pounds per hour when operating at a process weight rate of 22.0 tons of sand per hour, each.** ~~all exhausting to baghouse (BH-1), shall not exceed 45.1 pounds per hour when operating at a process weight rate of 53.0 tons per hour (44.0 tons of sand and 9.0 tons of metal).~~

- (b) Pursuant to 326 IAC 6-3-2(c) (Process Operations), the allowable PM emission rate from the one (1) north pouring/cooling deck and one (1) south pouring/cooling deck **shall** each not exceed 36.8 pounds per hour, each, when operating at a process weight rate of 26.5 tons per hour (22.0 tons of sand and 4.5 tons of metal), each.

The pounds per hour limitations were calculated with the following equations:

Interpolation and extrapolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour, and} \\ P = \text{process weight rate in tons per hour.}$$

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour, and} \\ P = \text{process weight rate in tons per hour.}$$